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NOTES ON REMOVAL OF A MISSILE FROM THE PERICARDIUM AND ON THE TREATMENT OF TUNNELS IN BONE.[1]

By **R. Scot Skirving, M.B., M.S. (Edin.),**

Honorary Surgeon to St. Vincent's Hospital, Sydney.

When Dr. Todd asked me to contribute some little addition to the work of this evening and suggested a note on a case I had of removal of a foreign body from the pericardium, I was doubtful of its being now of sufficient interest, as the details have already been published in the *British Journal of Surgery*, and, moreover, "Cauld Kail made hot again" is never an appetizing dish. However, the case was a rare one, even in the strange and varied surgery of the war, and I will repeat the outlines of the symptoms and treatment.

The other subject on which I propose to detain you for a few minutes, *viz.*, the treatment of tunnels and large cavities in bone, is a matter in which I take considerable personal interest. I have no doubt that many surgeons have here and there adopted the simple treatment I shall speak about. So far, however, as I have gathered from reading and conversation with others, I am unable to find any definite advocacy of the small detail we found so successful in these obstinate cases. My colleague at Millbank, Captain Lock, and I independently thought of the routine removal of one wall of the cavity and the first results of this treatment were published by Captain Lock in the *British Journal of Surgery* of July, 1916, to which I refer you for full particulars.

A.—The Heart Case.

As regards the heart case, the patient was a wholesome looking soldier of 22 who was wounded in France in October, 1915. He was hit under the left axilla, about the posterior axillary line. The missile travelled obliquely through his lung; there was no wound of exit. He suffered much from shock, remained nearly unconscious for several days and spat blood profusely. At this time the physical signs of pericarditis were present. He came under my care at Millbank in February, 1916, complaining of deep-seated pain in the chest and shortness of breath. If he tried to walk quickly he was "brought up all standing." His wound was soundly healed and, apart from his heart and lungs, he complained of no physical disability. Physical examination of the lungs revealed no pathological change, but by X-ray examination the shadows in the pulmonary area were considered darker than normal; but he was a coal miner by trade. His pulse was small and soft, over 100 per minute, with an occasional beat missed. The apex beat and cardiac dulness were normal in situation. There was a soft, blowing systolic murmur in the mitral area, not specially conducted into the axilla, probably loudest when at rest. The second sound was markedly reduplicated. No pericardial friction was heard.

[1] Read at a Meeting of the New South Wales Branch of the British Medical Association on July 25, 1919.

He had several X-ray examinations by the best experts in London. A foreign body was seen, apparently at or about the upper posterior reflexion of the pericardium and to the left of the middle line. On the screen the object moved, certainly with the heart's action, possibly with the pulmonary excursions as well. A diagnosis was made that a piece of metal, probably shrapnel casing, had gone obliquely through the left lung, perforated the pericardium from behind and was now lying partly within that sac, partly without, lying between or upon the pulmonary veins.

The patient, finding he was useless for work, readily agreed to an operation.

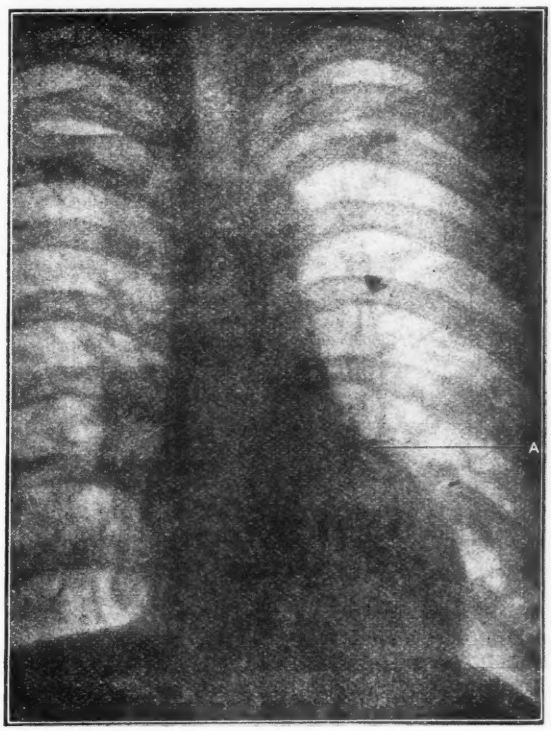

FIGURE I.

Antero-posterior view of the chest in which the foreign body, lying with its sharp edge on, looks rather like a rifle bullet. All the other marks seen are merely metal objects placed on the skin as landmarks.

The incision I used I can strongly recommend. From the centre of the sternum at the level of the sixth costal cartilage I cut along that structure outwards and downwards to its union with the rib. One should belly the incision downwards to demonstrate the lateral bridge joining the sixth to the seventh cartilage. The soft parts were now retracted and the cartilage laid bare. The pleura lies closely below the outer part, so the separation of the cartilage should begin at its inner end, which lies over "the triangle of safety," where the pleura does not reach. Anyway, one has to be careful in removing this sixth

cartilage, for fear of wounding the pleura. The *triangularis sterni* muscle is now exposed and one divides it. I cut the internal mammary artery and tied both ends. The pleura was now clearly recognized and pushed upwards and outwards with gauze. I next made a vertical incision rather to the left of the mid-sternum, as high as the level of the second rib, and finally the skin cuts were completed by a third incision from the upper end of the last incision horizontally outwards for nearly 7.5 cm., making a box-like flap. The periosteal structures on the sternum were pushed outwards with a rugine beyond the insets of the cartilages of the fifth, fourth and third ribs, which cartilages were divided. I now raised the whole flap of skin muscle and cartilage,

FIGURE II.
Lateral view of the chest. The lozenge-shaped appearance of the missile is plainly visible. The other objects on the surface are only landmarks.

at the same time stripping back the underlying pleura. This flap could be easily held up, so I did not crack the cartilages at their outer extremities. I could now see the dark oblique edge of the lung, like a shadow, 3.75 cm. external of the left side of the sternum, rising and falling under the thin veil of the pleura, which still covered the upper part of the pericardium. With the pleura carefully swept out of the way, the pericardium was exposed. I opened it and found it full of soft, sticky, blood-stained adhesions. I slit it fully up and broke down the adhesions easily. On passing my hand behind the heart, at the base, I was made happy by feeling something hard imbedded in soft cicatricial tissues. In these manipulations you must give the heart little spells of rest and avoid kinking its base. The value of these intermissions were noticed by the anæsthetist. I scraped the intra-pericardial portion of the foreign body free of adhesions with a blunt dissector. About two-thirds of it lay without the pericardium, resting on the pulmonary veins, I believed. It was really quite thrilling to look at the heart heaving and squirming before one's eyes like a hairless reptile. I delivered the piece of metal without accident or any embarrassing bleeding. The pericardium was stitched with Halstead sutures, the incision being everted so that a clean, serous surface within was obtained. The pleura was coaxed back into position and the flap replaced. The cartilages were anchored with stout catgut stitches. Much trouble was taken to keep the pectoral muscles quiet, the left arm being fixed alongside the body.

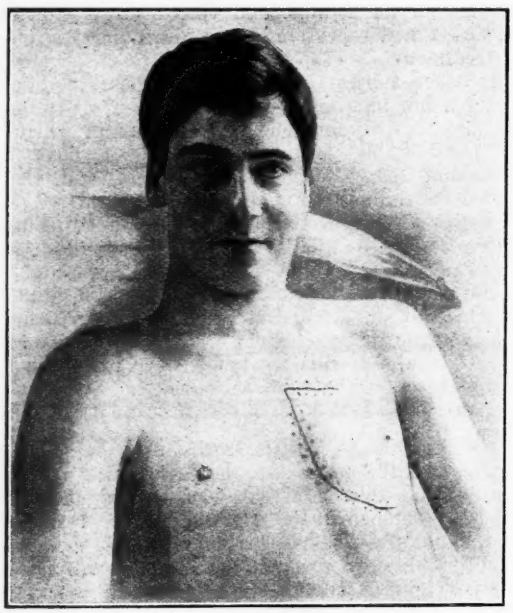

FIGURE III.
Showing lines of incision.

Mr. Rood, of University College Hospital, gave ether and oxygen in varying proportions through a tracheal tube connected with the usual apparatus for tracheal insufflation (Meltzer's method). This was used mainly in view of an accidental wounding of the pleura. I am glad I escaped this accident, but I would not have sorrowed as those who have no hope if I had done so. Probably the method of anæsthesia used in this case is the best, but if it had been unobtainable, ordinary methods would most likely have done nearly as well.

The patient remained in bed 42 days, mostly in the semi-recumbent position. By the tenth day the pulse fell to 80 and the wound was well healed. He is now, I believe, at work in London as a lift man.

B.—Treatment of Tunnels and Large Cavities in Bone.

My colleague at Millbank, Captain Lock, and I were both struck by the inveterate resistance to heal-

ing displayed in cases in which a sinus ran down through a tunnel through bone, or into a large cavity. We tried many expedients, as everyone has done, and as those who had the cases before us, had doubtless

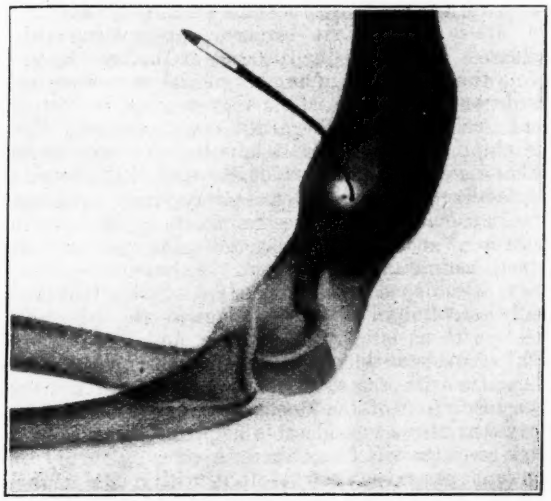

FIGURE IV.
Before operation. The probe passes right through the humerus.

done. At last we decided to deal with them by converting the tunnels into furrows or gutters and to destroy the cave-like configuration of large cavities by removal, as far as possible, of one side of the space.

I do not like to take up the time of the meeting

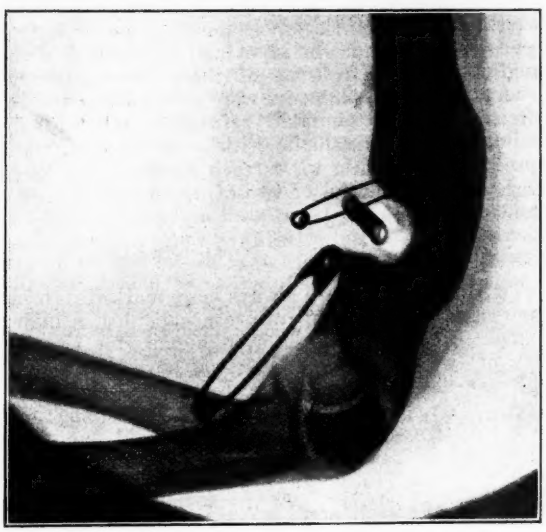

FIGURE V.
After operation. The anterior wall of the tunnel has been removed subperiosteally.

with a detailed account of the condition existing in these cases. I had rather refer those interested to Captain Lock's very convincing paper in the July number of the *British Journal of Surgery* in 1916. If you will look at the skiagrams I show, a few out of many, you will see the condition before operation and that after operation.

Following Captain Lock's summary of the condition, it may be said:

(1) The presence of tunnels and large cavities in bones as the result of gunshot wounds, as well as other pathological conditions, is a common cause of persistent sinuses, which continue to discharge practically indefinitely.

(2) Tunnels occur in cases where a long bone has been perforated and fractured by a bullet and where in treating the septic condition associated with these compound fractures, a drainage tube has been passed right through the middle of the bone, the bone uniting round a central cavity.

FIGURE VI.
Showing a tunnel through the humerus with several small pieces of bone in its lumen.

(3) The delay that takes place in the treating of the sinus is due to the fact that a chronic infection is present with which the tissues are unable to deal, since they are unable to obliterate the tunnel or cavity, the rigid walls of which will not collapse, so that the sinus which leads down to them, continues to discharge indefinitely.

(4) Attempts at sterilization of these cavities and tunnels by scraping and the use of disinfectants are in many instances unsuccessful, hence bismuth and iodoform pastes are not violently encouraging application in these cases.

(5) The treatment which was found most successful, was the sub-periosteal resection of one wall of the tunnel (access being gained by longitudinal incisions down to the bone), at right angles to the length of the tunnel, so as to convert the tunnel into

a groove or trough. The trough so made is drained through the more dependent incision and the bridge of soft tissues pressed down into the bone by fairly firm bandaging.

(6) The same measures apply in dealing with large cavities in bone, one side being removed periosteally, so as to convert them into a trough.

In the treatment of these chronically infected lesions I think Bier's treatment by passive congestion is a good adjunct and I also have considerable faith in the application of oxygen and ozone to the

FIGURE VII.
Showing result of operation.

interior of the wounds. As to how this application acts, we have seen these cavities fail to heal because the rigidity of the walls prevents their collapsing and the granulations are deprived of an adequate blood supply by the contraction of the subjacent scar tissue. The local application of oxygen and ozone enables these granulations to live and proliferate and so to fill up the cavities, and this action is made the more active if the walls are allowed to fall in by means of the operation herein advocated.

The skiagrams shown illustrate the method. I cannot recall a case in which in the end healing was not obtained.

SOME EXPERIENCE WITH DYSENTERY IN THE PALESTINE CAMPAIGN.[1]

By **C. Bickerton Blackburn, M.D.,**
Sydney.

During my service in Egypt there was no period in which there were not some cases of dysentery under my charge, the actual number varying a good deal, according to the season of the year and to the nature of the military operations taking place. The disease was always more prevalent during and immediately after an advance into enemy country, and less so when the troops became sufficiently stationary to allow of efficient sanitary precautions being adopted. Owing to the distance of the base hospital from the field, a large number of our cases were subacute or convalescent when they reached us, but we had to deal with many acute cases, especially those developing among patients admitted for wounds and other diseases and also among the staff of the hospital.

Bacillary infections were always more numerous than amœbic, the statistics for the first year showing a ratio of about 2 to 1; I should think this ratio was about maintained throughout. As success in treatment is so dependent upon early diagnosis, it is naturally essential to be able to diagnose the type being dealt with as quickly as possible, and I soon found that it was possible to differentiate between the two varieties with comparative certainty from a naked eye inspection of the stools alone. The clinical history was also a considerable help, for in acute bacillary cases the onset was almost invariably abrupt, the patient passing rapidly—often within 24 hours—from a condition of gastro-intestinal health to one of grievous disorder. After a few loose evacuations these were replaced by rapidly succeeding small squirts of more or less blood-stained muco-pus, often without even a fæcal odour. In acute amœbic cases, on the other hand, the small evacuations usually showed blood and mucus less intimately mixed and almost always contained some traces of brownish or greenish fæcal matter.

Though abdominal pain and colic were, as a rule, present in both, on the whole the colic and tenesmus appeared to be more insistent and distressing in the bacillary cases. In some of these the number of evacuations in the 24 hours were astonishing; indeed, often the patient resolutely refused to part with his bed-pan, preferring to lie with it under him, while successive peristaltic waves each resulted in a small gush of a teaspoonful or two of discharge. I do not think I ever saw a patient with amœbic dysentery as distressed as this and even in the worst cases the onset was always more gradual.

Toxic symptoms were always more marked in bacillary cases and the temperature usually had a higher range, often 39.4° C., or even higher, for the first day or two, and the patient soon developed a typically poisoned appearance, with sunken eyes and dry skin. The patients with amœbic infection, however distressed, never looked so ill and the temperature rarely rose above 37.8° C., if as high. I am fully aware that my clinical descriptions of these cases differ from the usually accepted ones, but would remind you that I am giving you only my own experiences and also that the treatment of amœbiasis by emetine nowadays controls it very rapidly.

In quite a number of cases there was a double infection, and it is worth noting that the period required for the development of the protozoal infection appeared to be distinctly longer than for the bacterial. In several cases in which the clinical appear-

[1] Read at a Meeting of the New South Wales Branch of the British Medical Association on July 25, 1919.

ances and pathological findings were negative for amœbæ and positive for bacilli, rapid improvement took place under appropriate treatment, but dysenteric stools reappeared a few days later, when active *Amœbæ histolyticæ* were found. Hence it is always a sound policy to obtain further pathological reports when a relapse is reported.

While it is desirable to base immediate treatment upon clinical findings, the final diagnosis will, of course, be made in the pathological department, and to be able to give a useful opinion, it is of paramount importance that the pathologist shall be supplied with quite recent stools. We found that if a suitable stool was "rushed" to the department while still warm, positive cultures were obtained almost invariably in cases clinically typical, while negative findings were almost as constant from specimens even a few hours old. The same applied to a great extent to amœbic cases, as the amœbæ so rapidly lose their motility.

The Shiga variety was the one found most frequently, but the Flexner type was fairly common.

Blood examinations were made in several cases. Acute bacillary infections usually showed a moderate leucocytosis, chiefly an increase of neutrophiles, about 10,000 being the rule. Histolytica cases showed a somewhat higher count, 10,000 to 20,000, but we came to be suspicious of cases with counts above 15,000 as being likely to have hepatitis or hepatic abscess.

We had a few cases that are worthy of special mention. One patient, in spite of a coincident infection with malignant malaria, appeared to be making excellent progress towards recovery from a Shiga infection, when he suddenly passed a large amount of fairly bright blood and thereafter, till he died blanched, about ten days later, he continued to pass fairly satisfactory stools, alternating with profuse hæmorrhages. I had expected to find at the *post mortem* examination a large ulcer in a healing bowel and was surprised to find the whole of the large bowel right to the caecum twice its normal thickness and lined with a spongy mucous membrane, varying in colour from deep red to purple and pitted with countless small ulcers. It was impossible to detect the source of the hæmorrhages.

This case helped to explain a rather puzzling condition we had met with in a few cases in which, while making good progress, almost normal stools would be occasionally followed by an evacuation of 50 to 100 c.cm. of evil-smelling pus. At first I had suspected an abscess intermittently discharging into the bowel, but gave up that hypothesis when the symptoms rapidly cleared up with further serum treatment. I am now of opinion that they are on all fours with those cases of mucous colitis, in which so often an evacuation of a large quantity of mucus will alternate with comparatively normal stools and may be taken as indicating that the bowel takes a long time to be restored to normal.

Uncomplicated amœbic dysentery presented a few features of special interest, but two patients who died from secondary hepatic infection are worthy of mention. In the first of these, treated originally for paratyphoid fever, owing to his having a continuous high temperature and an agglutination of 1 in 1,250 to *Bac. paratyphosus B*, but later found to have active *Amœbæ histolyticæ* in his stools and treated with emetine, a leucocyte count of 15,000, with a high percentage of neutrophiles, led to a suspicion of amœbic abscess of the liver. X-ray and repeated clinical examinations failed to demonstrate any decided enlargement of the liver. Finally, a rigor, accompanied by a friction rub over the upper surface of the liver, determined us to interfere surgically, and it was then found that, though but little larger than normal, the liver was practically a shell containing apple-jelly pus. The patient died of exhaustion about a week after the operation.

The other patient, a 1914 man, was evacuated from the front in December, 1918, with a history of a sudden rigor and high temperature a few days before and a provisional diagnosis of "malignant tertian malaria, clinical, no parasites found." On arrival his temperature was over 39.4° C. and he looked extremely ill; he was vomiting and had some pain in the upper regions of his abdomen, especially in the right hypochondrium, with slight increase of the liver dulness. He looked septic rather than malarial and his blood showed a leucocytosis and no malarial parasites. He was a sergeant, a very intelligent man, and, when closely questioned as to his previous history, stated that he had a mild attack of dysentery on Gallipoli, but had not been evacuated for it and that since then he had never had any trouble with his bowels whatever, neither diarrhœa nor constipation, that his general health had been excellent and he had been in every fight.

Examinations of the stools proved negative for amœbæ and cysts. After being in hospital about three weeks with a hectic temperature, the pain in the right hypochondrium became very intense and an exploratory laparotomy was performed, in view of the possibility of his having a sub-diaphragmatic or hepatic abscess. Neither was found and the high temperature continued till he died about a fortnight later with symptoms of septicæmia. At the *post mortem* examination the caecum was found to be greatly thickened and densely adherent to the surrounding tissues. The muscular coat was like india-rubber and the mucous membrane was thickened, sloughy and covered with chronic ulcers, the condition extending up for about 15 cm. into the ascending colon. The rest of the colon showed some scarring from healed ulcers and a few congested patches, but was otherwise fairly healthy. Right in the centre of the liver there was two thick-walled abscesses the size of walnuts.

The treatment of bacillary cases briefly consisted of absolute rest in bed, an abundant allowance of water but a withholding of all food till yellow or brown, fæculent matter re-appeared in the evacuations, and the administration of saline aperients and polyvalent serum. All foodstuffs, and particularly milk, seem to be positively harmful in the acute stage and only water, clear broths, rice water and barley water were allowed till definite improvement set in. The diet was then most cautiously increased, water-arrowroot, Benger's food, milk and other articles being added day by day. Either sulphate of soda or

sulphate of magnesia was given in 3.6 grm. doses every two hours, in a mixture containing also some dilute sulphuric acid, and was continued till the tenesmus was relieved and the motions were fæculent, when the interval between the doses was then gradually increased. When recent, reliable, polyvalent anti-dysenteric serum was available the effects of its administration were remarkable. Our most resistant cases were met with in the period during which, owing to submarine activity, fresh supplies of serum did not come to hand. We found that the doses usually prescribed were much too small, and latterly our routine plan was to inject 100 c.cm. into the adductor muscles of the thighs on two successive days. This was usually sufficient, but if rapid improvement did not take place, or when there was any sign of relapse, further injections were given.

Opium preparations we found it best to avoid studiously, except for the purpose of giving rest occasionally to extremely exhausted patients. In such we sometimes gave gentle rectal lavage, with warm saline solution, followed by a small starch and opium enema. This was often retained for a few hours and enabled the patient to obtain a little rest.

In our earlier cases we used bowel washes of tannic acid and silver nitrate a good deal in subacute and chronic cases, but we gradually abandoned them and during the last twelve months the saline washes mentioned were practically the only rectal treatments carried out.

We found that the results of treatment varied directly with the stage at which it was begun. When a case was dealt with on the above lines within the first day or two of the illness, convalescence began in a few days and recovery was usually complete in three or four weeks. On the other hand, patients who came under our care after two or three weeks of half-hearted treatment on the way down from the front, did not fare nearly so well and often had to be evacuated to Australia with a chronic or intermittent diarrhœa. Such cases are usually classified as chronic dysentery, but many of them would probably be described more correctly as "chronic colitis, post-dysenteric." We had only one death from uncomplicated dysentery. This was a case taken over after two months' treatment, not on the above lines, in another hospital. The patient was in a moribund condition and too bad to move out with the other patients when we took over the buildings. Of the four other patients that died, two had malignant tertian malaria and two pneumonic influenza as well as bacillary dysentery. I heard that one of the patients with chronic dysentery evacuated to Australia died soon after his arrival.

The treatment of acute amœbic dysentery practically resolves itself into the intramuscular injection of emetine, 0.06 gramme being given daily for twelve days. It is well to divide the dose at first into 0.03 gramme morning and evening, as occasionally the full dose upsets the patient at first, but after a day or two we usually gave the single dose of 0.06 grm., in order to diminish the number of painful spots. In severe cases we often gave 0.09 grm. in three doses daily for the first two or three days. During the day or two that the symptoms are acute it is as well to give the water diet and saline aperient mixture prescribed for bacillary dysentery, but the return to a liberal diet can be generally much more rapid.

After completing the twelve days' course we searched the stools for cysts or *Entamœba histolytica* and if they were found, we gave emetine bismuth iodide, 0.18 grm. by mouth each night for twelve nights and when this was well taken, we usually found the stools free of cysts at the end of the period. Unfortunately, we were never able to obtain keratin-coated capsules, and many patients vomited the precious powder—it cost 11s. 3d. a gramme. We found it best to wake the patient from a sound sleep just enough to swallow his dose in some warm milk and then let him doze off again.

After three weeks' convalescence we allowed the patients to return to the field without further search for cysts, though we knew that we might, indeed, would, find them in some cases, but it was unpracticable to go on trying to clear them out, in view of the difficulties reported in bringing this about in other places.

I have no doubt that many of those who have returned here, both before and after the armistice, harbour these cysts and we must all be ready to recognize recurrences of dysentery, as well as amœbic abscesses of the liver.

We had many cases of these abscesses, as well as hepatitis from the same cause; all the patients recovered except the two I have already mentioned. Some were operated upon, being at the same time given emetine, and several, including two who coughed up the pathognomonic apple-jelly pus, cleared up on emetine alone.

In speaking of dysentery I have not so far alluded to the so-called flagellate dysenteries supposed to be due to trichomonas, tetramitus and lamblia. Though we often found one or more of these organisms present in abundance in stools, we were never satisfied that they by themselves produced true dysentery, *i.e.*, an inflammation of the bowel resulting in evacuations containing blood and mucus. In several cases, however, I thought that persistent or recurring diarrhœa was due to their presence.

WORK AT A CASUALTY CLEARING STATION, WITH REFERENCE TO NEW METHODS.[1]

By **A. S. D. Barton, M.B., Ch.M., D.S.O.,**
Singleton, New South Wales.

I feel it a great honour to have been asked to address this meeting to-night. I know I cannot do justice to the subject, but I hope I may be able to interest some of you. The so-called new methods adopted in casualty clearing station work have, I think, nearly all been reported in the journals, so what I may have to say to-night will probably be familiar to many of you. I have not kept notes of the work done and have only my memory and diary to rely on, so hope I will be pardoned for the sketchy nature and lack of figures in what I say. I joined the No. 1 Australian Casualty Clearing Station in September, 1915, and was with that unit on Gallipoli

[1] Read at a Meeting of the New South Wales Branch of the British Medical Association on July 25, 1919.

and in France and was doing surgery at a casualty clearing station (with the exception of three months in 1918 during the German advance, when I was with my team at the base) up till the end of October, 1918. At the casualty clearing station the surgery was nearly all done in times of rush by surgical teams. These teams consisted of a surgeon from some casualty clearing station that was not busy, an anæsthetist, theatre sister and two theatre orderlies. With the British teams the anæsthetist was often a sister who had had a special course of training in anæsthetics at the base and who was sent up to a casualty clearing station when declared proficient. The Australian sisters were not allowed to administer anæsthetics, so that Australian teams had a medical officer as anæsthetist as a rule, but I took a trained orderly away with me once and found it quite a success. Towards the latter stages of the war, in March, 1918, the Australians formed permanent surgical teams that were nominally attached to the base hospitals and supposed to report back there when not wanted at a casualty clearing station. I reported to No. 2 Australian General Hospital with a team in the latter part of March, 1918, but was only there for about two or three weeks and was then sent to a British base hospital and then up to a casualty clearing station again. I think that most of the surgical teams spent very little of their time at the base hospital that they were attached to. A team travelled with its own set of instruments and on arrival was usually allotted two tables in the theatre, or one table, if there were not enough tables to allow each surgeon two. The team drew its gloves, dressings, catgut, etc., from the casualty clearing station it was sent to and became quite a self-contained little unit, having its own space in the theatre and its own instrument sterilizer. One orderly prepared the patient and handed whatever was required by the sister or the surgeon, while the second orderly kept the floor clean, sterilized the bowls and instruments and washed the macintoshes and was available to assist the anæsthetist in getting another patient under, while the first was being finished. I think the sister had the hardest work in a team, as she was responsible for the stock of everything and for keeping the instruments in order, and also did all the assisting at the operation. Usually she had to be in the theatre about a half of an hour before starting time and about a quarter of an hour after finishing, so that she worked longer hours than her surgeon. Usually a team was on for 12 hours in the theatre and off for 12 hours, but at the start of a rush it was often the practice to keep some or all of the teams on for 24 hours on end, so as to cope with the first rush. When the work was heavy and teams few, it was often necessary to work 16-hour shifts. The operating surgeon was responsible for his patients until they are evacuated from the casualty clearing station. When working 16-hour shifts it was hard to give much attention to post-operative cases in the ward and a good ward sister saved a great deal of anxiety. I think the work of the sisters at a casualty clearing station in a rush is beyond praise and I often wonder how they stood it, especially as they often spent nearly half the night being shooed in and out of dug-outs on account of air raids or alarms.

I think the greatest change that came over the work in casualty clearing stations in 1918 was due to the knowledge that septic wounds could be completely sutured and would heal by first intention. I expect many of you are familiar with the work that was done at No. 10 Casualty Clearing Station on the primary suture of wounds. There it was found that wounds could be closed by primary suture that had formerly been left open. They selected the cases there for primary suture. All cases of multiple wounds were rejected and all cases in which obvious inflammation had set in. With these cases rejected it was found that primary suture could be done after complete excision of damaged tissues and would result in primary union in spite of the fact that practically all these wounds were infected with organisms (aerobic and anaerobic).

At No. 10 series of cases were taken and treated with different antiseptics before the suture was done, but it was found that as long as the excision was carefully and completely done, it did not matter which antiseptic was used, or if none was used, the results were the same. It was found that wounds infected with a streptococcus that caused hæmolysis did not, as a rule, unite after primary suture, however carefully performed. It was also found that the men with wounds that were sutured, did not, as a rule, travel well, rest being essential. That was a great drawback from the casualty clearing station point of view, as we never had enough beds to be able to hold many patients if they were fit to travel and nearly all our men were operated on and sent straight on to a base hospital. As it was not considered justifiable to close a large, deep wound completely and send the man off in the train, primary suture could only be done in casualty clearing stations to any extent when things were slack and the patients could be held for a few days. When the men had to be sent straight on after operation it was arranged that the primary excision should be performed at the casualty clearing station and the wound left open usually with a 1 : 1,000 flavine pack and if the case was suitable for primary closure, the patient was sent with a huge label "D.P.S." (delayed primary suture). On arrival at the base this man had his wound sutured if it appeared to be doing all right and he was held there till all danger of his wound breaking down was over. These patients did nearly as well as those closed at the casualty clearing station, provided they were not touched at the base before being sutured. When at the base in the early part of 1918 I found the hospitals were filled with septic cases and any large open wound requiring frequent dressings was bound to become infected. The only chance for suture was to do it before the dressing was changed at all. The man, if his temperature and pulse were normal and he appeared comfortable, was taken to the theatre, the packing removed under an anæsthetic and the wound sutured at once, if possible. Under these conditions I think about 70% healed by primary union, including such conditions as compound fractures and the like. When the base was rushed, many of the cases suitable for primary suture could not be sutured

in France and I fear probably were not sutured at all. The wounds that I saw in men arriving at the base for suture were treated in all sorts of ways; some were packed with flavine (the most frequent), some with salt, others with soap and many were treated with "B.I.P.P." (bismuth, iodoform and paraffin paste), which is my favourite method. They all did equally well, the primary excision being the important factor.

Another big change that took place in casualty clearing station work was due to the introduction of "gas" and oxygen as an anæsthetic. This was found a great advance on any other method of anæsthesia for patients who were suffering severely from shock. It was used almost exclusively for such operations as amputations and for operations on the chest. At one casualty clearing station all the abdominal operations were done under nitrous oxide and oxygen and the patient had a blood transfusion as soon as the operation was completed. The surgeon was very pleased with his results and his figures were certainly startling, 76% recoveries, but, of course, his cases may have been picked. "Gas" and oxygen does not always give complete abdominal relaxation, and it is as well to use a local anæsthetic for the line of incision. This gives considerably more relaxation. At times when the wound was being closed, it was necessary to add ether to the "gas" and oxygen, but this should be avoided as far as possible. In chest cases "gas" and oxygen proved of the greatest service. The amount of oxygen given varied greatly when the pleura was open, as compared with when it was closed. If a patient with a chest injury was in good condition and not suffering much from hæmorrhage or shock, it was found advisable to give him morphine before operation. Usually 1 c.cm. of omnopon was given and repeated if necessary, that is, if the patient was not decidedly drowsy. The same applies to patients with injuries of other parts of the body, it being found difficult to induce and maintain anæsthesia by "gas" and oxygen alone in a robust man. "Gas" and oxygen seemed to cause no lowering of blood pressure and patients who had had a blood transfusion and whose pressure was rising, would continue to improve, despite an amputation under this anæsthetic.

Knees.—The usual method of treating penetrating wounds of knee joints in a casualty clearing station, when I left was to excise the track completely, to remove the foreign body, to wash out the joint thoroughly, to close the capsule and wound in layers without any drainage and to immobilize the limb. Drainage of knees was given up early. I met a Belgian doctor (C. Willems was his name), who practised active movements of all knee joints immediately after operation. When I was speaking to him he only had a series of forty cases, but his results certainly seemed very good and were causing a lot of interest. His methods were tried tentatively in some casualty clearing stations. His method was to operate on the knee in the usual way with a complete excision and closure and then, instead of applying immobilization of the joint, to insist on the patient performing active movements as soon as he was conscious from the anæsthetic. He had an orderly or a sister beside the patient's bed, who explained as soon as the patient awakened that the operation had been quite successful and that he (the patient) could now move his knee. For the first 24 hours the patient was compelled to move his knee every hour or so, and after the first 24 hours he would continue to move it without encouragement. The patient was encouraged to walk as soon as possible after the operation, on the third day if there had not been much bony damage. If the knee-joint became septic or was obviously septic on admission, a wide arthrotomy was done on each side of the joint and the patient was compelled to move his knee as soon as he regained consciousness. These movements were all active and promoted the drainage of the joint. The patient was awakened at intervals during the night and compelled to move his knee. After the first 24 hours it was claimed that he would readily move his knee himself and he was encouraged to walk at a very early date. Thus men were walking about with pus escaping from their knees at every stride. It was claimed for this method that drainage was complete and continuous and that the cartilages did not erode and the patient was left with a movable joint. As I said before, I never saw this method tried extensively and not at all in septic cases. Immobilization of the joint in aseptic cases gave quite satisfactory results as far as I know, as we used to get reports back that the patients were walking about and had full movement of the joint. I think it was wonderful how well the knee joint cases did, seeing that in practically all cases the joint cavity was infected. At a casualty clearing station we did not see very many septic knee joints, as the patients were evacuated too soon, as a rule, especially in busy times when one would expect more of the cases to become septic. When at the base I saw a good many septic knee joints, and looking after them was a great strain on both the doctor and sisters. The majority were treated by wide arthrotomy of the joint on each side of the *ligamentum patellæ* and the limb immobilized in a Thomas's splint. These men had a very long and painful series of dressings before them and a stiff joint at the end of it, if the leg was not amputated. Any method that can seemingly obviate all this, is, I think, worthy of an extensive trial.

Blood transfusions, though not, perhaps, a very new method, was more extensively used in casualty clearing station work than anywhere else, and they were being more and more used. Nearly all methods were given a trial, I think, and the one that was most favoured and almost exclusively used at the casualty clearing stations was the transfusion of whole blood by the paraffined tube method. At a casualty clearing station there was never any dearth of donors. All who volunteered to give blood were classified and the group 4 men kept as donors. As soon as the supply of donors was getting low, another batch would be tested and the group 4 men retained. These donors were kept in bed for 24 hours usually after giving their blood and were then sent to England on three weeks' special leave. They seemed to think three weeks in England were cheap at the price of a litre of blood. Blood transfusions saved so many lives and became such a necessity at a casualty clearing station that men used to be sent from ambulances in

rest to do blood transfusions at a casualty clearing station that was busy. Usually two officers would be sent and one would do day duty and one night. They had their own tent, appliances and sister detailed and all patients requiring transfusion were sent straight along to them and so the operating surgeons lost no time doing transfusions. In my opinion, there is nothing like a transfusion of a litre of blood to revive a badly shocked and exsanguinated patient. We tried all sorts of solutions for transfusion, such as saline solution, sodium bicarbonate solution, gum solution, etc., and none had half the effect of blood. The patient keeps on getting better and better in a wonderful way after he has had a blood transfusion. Blood may be given, of course, before or after operation, or both. Many patients whose condition appears to be hopeless, will stand a severe amputation under "gas" and oxygen after a blood transfusion and continue to pick up. I have seen no bad after effects in the donors, and several men in the unit gave blood twice. One man from whom I withdrew a litre of blood too fast became very collapsed and was anæmic for some time afterwards. In order to make the withdrawal a slower process I think it is as well always to use two tubes of 500 c.cm. each and to fill and empty one tube and then to fill and empty the other. In this way the donor gets a few minutes' interval between his bleedings. Doing a transfusion in this way with two tubes of 500 c.cm. each and a good donor one man with a sister or orderly to assist him can do a transfusion in about twenty minutes. The time varies a little, of course, with the operator and with the donor, some filling the tube a good deal faster than others. A method that was fairly extensively used (particularly in ambulances, I think) was the preserved citrate method. In this the blood is taken from the donor into a citrate solution and placed on ice. It is kept on ice until required and is administered like an intravenous injection of saline solution. I have had no experience of the method myself, but it was stated to be nearly as good as the fresh blood method and was, of course, quicker and easier to give. The blood can be obtained when things are slack and kept till required.

Another easy method of administration is to bleed the donor into a citrate solution that is stirred to prevent clotting, and then to administer the whole thing exactly as in the case of an intravenous injection of saline solution. Personally, I think the direct method, with paraffined tubes, is just as quick and gives better results. It may be a little more trouble to carry out. I never saw any case of incompatability, but, of course, they do occur. We were always careful to use only group 4 donors, and that, I think, reduces the risk to a minimum.

With regard to penetrating wounds of the abdomen, no new method was introduced, if one excepts "gas" and oxygen as an anæsthetic. In these cases drainage was early reduced to a minimum. One of the main factors in success is the length of time that elapses before operation and the distance the patient has to be transported. The figures for abdominal operation at the No. 2 Australian Casualty Clearing Station were much better when the hospital was close to the line and the men were received soon after wounding and with only a short ambulance journey.

Penetrating wounds of the head were largely done in hospitals set apart for these cases. It was found that patients with penetrating wounds of the head did not stand being moved after operation, and so the men who were operated on at casualty clearing stations were retained for ten days or so if the operation was successful. If beds for retaining these patients were not available, they were evacuated to the base, to have their operation there. Some surgeons claimed that this delay in operation was not prejudicial in head cases. If this is so, it is contrary to what was established in all other classes of wounds, as one of the maxims was that excision of damaged tissue must be free and complete and done as early as possible.

Chest wounds were treated largely according to the individual judgement of the surgeon. Some surgeons made a practice of operating on nearly all penetrating wounds of the chest. The track or tracks would be completely excised down to and through the pleura. Retained foreign bodies removed, if possible, the pleura dried out and completely closed and wounds closed in layers. All wounds with air sucking in and out of the pleura were operated on nearly as a routine if the patient was not moribund. On the other hand, many surgeons did as little operative interference in chest cases as possible, being content to treat most cases by aspiration and only to operate on the cases of sucking wounds or where there was some other well marked indication.

"THE MILITARY SURGEON."

The June (1919) number of *The Military Surgeon* in addition to much matter of scientific interest to the medical profession, contains an appeal to American medical practitioners who have served in the Army of the United States to join the Association of Military Surgeons of the United States as they pass back into civil practice. This Association provides its members with the means of keeping in touch with their sometime comrades on active service, preserves their interest in military medicine and is a bond of loyalty and patriotism. Those who served in the Army Medical Corps of the American Army, have returned with the feeling that they have lived. They maintain that they would not have missed their experience for anything on earth. The Association of Military Surgeons and its official organ, *The Military Surgeon,* will assist in securing for its members the fullest advantages of war experience. We hope to bring to the notice of our readers from time to time some of the messages conveyed through *The Military Surgeon.*

A NEW CLINICAL JOURNAL.

Dr. Frank Smithers, a skilled teacher in clinical medicine and a specialist in gastro-intestinal diseases, has undertaken an arduous task of publishing each quarter a volume of approximately 200 pages of discussions of cases that he meets in his clinic at the Augustana Hospital in Chicago. This volume is called the *Quarterly Medical Clinics.* Number one, bearing the date of January, 1919, is in our hands and we have small doubt but it will be in the hands of many medical practitioners in the Commonwealth within a short time. Whether Dr. Smithers will be able to maintain the same excellence in the succeeding issues that characterize the first, remains to be seen. The publication has several somewhat unusual qualities to recommend it. In the first place, it is quite innocent of advertisements. In the second, it is the teaching work of one man and the material is therefore arranged from a didactic point of view. Thirdly, the author

and editor has interspersed among the clinical discussions, concise and valuable descriptions of laboratory methods. He takes nothing for granted and sets out the methods recommended in sufficient detail to enable any medical practitioner to grasp the processes and possibly to apply them himself. The case descriptions, discussions on diagnosis and brief lectures on the nature of the lesions and other points of clinical interest are excellent. The paper on which the case reports are printed is of a high quality and the printing is first class. Both these matters are of value to the tired reader. The illustrations reproduced on a fine art paper, are in keeping with the rest of the production. The readers of *The Medical Journal of Australia* will have opportunities of becoming acquainted with the interior of the clinics from time to time. It is published by "Medicine and Surgery Publishing Company, Incorporated" of Saint Louis, United States of America, and the subscription price is five dollars for the annual volume in paper binding or eight dollars in cloth binding.

Naval and Military.

APPOINTMENTS.

The following terminations of appointments have been gazetted on July 31, 1919:—

Australian Imperial Force.

APPOINTMENTS TERMINATED.

First Military District.

Major R. Kellas. Dated 3rd May, 1919.

Second Military District.

Major E. B. M. Vance. Dated 28th June, 1919.
Major A. V. Meehan. Dated 19th July, 1919.
Major W. K. Inglis. Dated 16th July, 1919.
Major K. M. Whiting. Dated 10th July, 1919.

Third Military District.

Captain J. Gray. Dated 25th May, 1919.
Captain (Honorary Major) A. E. Callow. Dated 16th June, 1919.

Fourth Military District.

Major C. H. Kellaway, M.C.. Dated 29th July, 1919.

The following appointments, etc., have been notified in the *Commonwealth of Australia Gazette*, No. 98, of August 7, 1919:—

Permanent Naval Forces of the Commonwealth (Sea-going Forces).

To be Temporary Surgeon-Lieutenant—

Temporary Surgeon-Lieutenant John Smith, M.B., R.N., temporary service. Date of appointment, 13th February, 1919; seniority in rank, 20th July, 1915.

Auxiliary Services—Royal Australian Naval Brigade.

TRANSFERS TO THE RETIRED LIST.

The following officers, having reached the maximum ages for retirement, are transferred to the Retired List as from the dates shown opposite their respective names:—

Surgeon - Commander Archibald Birt Brockway. Dated 1st November, 1919.
Surgeon-Commander Harry Paynter Sloggett. Dated 20th April, 1919.
Surgeon-Lieutenant Walter Blake Nisbet, V.D.. Dated 15th August, 1918.
Surgeon-Lieutenant Fossey James Newman. Dated 18th April, 1919.

Australian Imperial Force.

Second Military District.

Major (Temporary Lieutenant-Colonel) J. A. James, 4th Field Ambulance, Army Medical Corps, relinquishes the temporary rank of Lieutenant-Colonel. Dated 8th April, 1919.

Australian Naval and Military Expeditionary Force.

To be Captain—Army Medical Corps—

Honorary Captain C. W. Whiting, M.C., Australian Army Medical Corps Reserve. Dated 2nd July, 1919.

Australian Military Forces.

GRANT OF HONORARY RANK.

The undermentioned, who have served in the Australian Imperial Force as Commissioned Officers, having the rank held by them confirmed as Honorary Rank in the Australian Military Forces, as follows:—

Officers who, on appointment for active service outside Australia, were serving and are now serving in the Australian Military Forces.

Third Military District.

To be Honorary Lieutenant-Colonels—

Honorary Major J. W. Springthorpe, Australian Army Medical Corps Reserve. Dated 19th October, 1914.
Captain C. E. Dennis, Australian Army Medical Corps. Dated 18th September, 1917.

Fourth Military District.

To be Honorary Major—

Captain L. G. Tassie, D.S.O., Australian Army Medical Corps. Dated 28th January, 1918.

Officers who, on appointment for active service outside Australia, were not serving in the Australian Military Forces.

Third Military District.

To be Honorary Lieutenant-Colonel—

D. D. Cade, D.S.O.. Dated 2nd May, 1918.

To be Honorary Majors—

L. R. Cook. Dated 29th January, 1917.
J. V. Griffith. Dated 24th August, 1917.

To be Honorary Captain—

H. G. D. Bredal. Dated 23rd October, 1918.

The following appointments, etc., are published in the *Commonwealth of Australia Gazette*, No. 100, of August 14, 1919:—

Australian Imperial Force.

APPOINTMENTS TERMINATED.

First Military District.

Lieutenant-Colonel P. E. Voss, M.C.. Dated 18th August, 1919.
Captain J. K. Patrick. Dated 12th June, 1919.

Second Military District.

Lieutenant-Colonel R. S. McGregor, D.S.O.. Dated 20th August, 1919.
Lieutenant-Colonel A. L. Dawson, D.S.O.. Dated 24th June, 1919.
Major L. W. Bond, D.S.O.. Dated 10th August, 1919.
Major J. S. Smyth. Dated 5th August, 1919.
Major D. J. Glissan. Dated 22nd August, 1919.
Major K. F. Vickery. Dated 6th May, 1919.
Captain J. W. Farrar. Dated 3rd August, 1919.
Captain P. J. F. O'Shea, M.C.. Dated 29th July, 1919.
Captain G. A. Blumer, M.C.. Dated 3rd August, 1919.
Captain H. Leaver. Dated 28th July, 1919.
Captain H. R. Sear. Dated 15th July, 1919.

Third Military District.

Major J. H. Downing. Dated 16th March, 1918.
Major C. L. Lempriere. Dated 20th June, 1919.
Captain A. R. Thorne. Dated 16th May, 1919.

Fourth Military District.

Major E. J. Brown. Dated 18th August, 1919.
Captain R. G. Burnard. Dated 9th August, 1919.
Captain D. Parkhouse. Dated 29th July, 1919.

The Medical Journal of Australia.

SATURDAY, AUGUST 23, 1919.

The Future of the Army Medical Service.

A glance through the lists of names of medical officers of the Australian Military Forces to-day teaches two things quite clearly. In the first place the lists are long because of the war just ended. There are the men who served in the Australian Imperial Force and in the Naval and Military Expeditionary Forces abroad and there are those who joined the Australian Army Medical Corps Reserve in response to the appeal for home service men. Both those who had been on active service outside the Commonwealth and those who performed duties without going away, are turning their attention to civil practice and peace conditions. The war is a thing of the past and their part has been played, be it great or small. Unless some surprising event takes place, the lists will dwindle gradually at first and more rapidly after a few years. In the second place the lists reveal an unfortunate want of discrimination between the men who served abroad and those who did little or much for the safety of the Commonwealth. Moreover, men who rose in rank as a result of splendid war service in France, Egypt and elsewhere and attained distinction, are in many cases classed among the Captains and Majors of the Reserve side by side with the home service men. This indicates a lack of satisfactory organization and a need for a thorough revision of the plan on which the Army Medical Corps is built up. The experience of the war has shown that greater utility could have been achieved, especially during the early stages, had there been adequate preparedness and more prevision. While these defects in organization are fresh in our minds, an attempt should be made to place the service on a scientific and sound foundation at once. Given a well devised scheme, it should be relatively easy to keep the service in a state of efficiency, ready for any emergency at any period of Australian history.

It has been stated that the military services of the Commonwealth are to be re-organized within a short time. The Army Medical Corps forms an important branch of the services and to insure the best results in any future eventuality, the most meticulous care should be taken to adjust all the details of the service properly and at once. The Federal Committee has approached the Minister for Defence with the request that the British Medical Association should be consulted before any scheme of reform is finally adopted. The Minister has given a promise to give effect to this and we may rest content that no plans will be sanctioned until they have been submitted to the British Medical Association for criticism. It appears to us, however, that a few matters of general principle should be brought to the notice of the military authorities before the scheme is drawn up. Once a plan has been evolved, it may be difficult to persuade its authors to scrap it and to start afresh. Since the object should be to maintain a service in a state of permanent efficiency, enlistment in the Army Medical Corps should be stimulated by an attraction for the service. The invidious distinction between combatant and non-combatant officers should be removed. War experience has demonstrated most clearly that the personal risk of a regimental medical officer is even greater than that of a combatant officer. The men in casualty clearing stations, in field ambulances and on transport service displayed a bravery that was certainly not less conspicuous than that of the fighting men. The holding of a commission should entail regular duties and recurring periods of training. Whether part of the service should be spent in hospital to equip the men for the task of establishing and running a military hospital in war should be carefully considered. The remuneration for the periods of service should be adequate and commensurate with the earning capacity of the medical officers in their civil capacities. Courses of instruction in military medicine should be arranged. In addition medical practitioners and medical students should be reminded year after year of the advantages to the State and to themselves of joining the Corps. The whole administration of the service should be in the hands of its actual head. In other words the Director-General Medical Services should be independent of the military organization. He should report direct to the Minister for Defence and not through

the channel of the official Adjutant-General's Department. This arrangement would result in a freer hand being given to this responsible officer and a consequent improvement in the efficiency of his service. He should have a fixed rank. At present he may be a Brigadier-General, Surgeon-General or Major-General. It would be advisable for the Director-General to be a Surgeon-General with rank equivalent to that of a Major-General. The rate of remuneration from the highest officer to the last-joined should be on a sliding scale. A Captain should receive more after two or four years' service than on joining, and a junior Major should receive less than a senior Major. Moreover, promotion should be determined by efficient service and not merely by length of service.

The authorities should recognize the unwisdom of allowing the Army Medical Corps to relapse into a sort of social club with a small and select membership. It should be a living, military piece of machinery, large enough to be of immediate real service in time of war and constantly receiving fresh increments. Steps should be taken to maintain the magnificent traditions that those who have served overseas, have fashioned for it out of flesh and blood. The young men passing into the medical profession should take a pride in being members of the same service as those were who gave their all during the great war, and should make it a matter of honour to preserve the traditions of that service.

THE FUTURE OF OUR MEDICAL SCHOOLS.

During the past six months reference has been made in these columns on many occasions to the urgent need for a reconsideration of the medical curriculum and for a reconstruction of the programme of medical education. The present time appears to be peculiarly opportune for the introduction of drastic changes. Australia is recognizing more clearly every day the necessity of working out her independence. In the past nearly all the teaching posts in the medical schools have been filled by candidates who had graduated overseas. The prophet appears to have no honour in his own country. As the equipment of the medical schools at Sydney, Melbourne and Adelaide developed, the full curriculum was gradually pieced together, until provision was made for the preparation of young men and women for medical practice. It has become almost habitual for a student or graduate who desires to raise himself above the average of his compeers, or who discovers in himself a bent for a special line of medical activity, to seek additional training in the seats of learning at the other side of the world. Then again the schools have been allotted professors not so much in response to the demands of the several branches of medical science, but rather on the basis of the amount of money available for the purpose. The increase in the number of chairs and the need for more should be regarded as an indication that the time has come when haphazard building should cease and make room for a deliberately planned scheme. In the next place, the awakening of the interest of the public in matters appertaining to health must determine the position that preventive medicine is to fill in the activity of the future profession of medicine. And lastly it must be admitted that the accumulation of knowledge is rapidly leading to an overloading of the curriculum. The only remedy is a thorough revision of the matter that has to be taught to the student.

Quite recently the Chancellor of the University of Sydney has addressed the public of New South Wales on the subject of the need for the provision of much more accommodation for the students at the University. With the overcrowding in the other faculties we have no direct concern. But it may be noted that the elbow-room in the class-rooms of the Medical School is at least as restricted as it is in any other part of the University. Be this as it may, the fact remains that the students of medicine number 852, as compared with 637 students taking the arts course and 721 distributed among all the other faculties, including engineering, law and veterinary science. It is therefore reasonable to claim that the requirements of the Faculty of Medicine should have prior consideration. Moreover, if a satisfactory reorganization of the medical curriculum and a corresponding expansion of the Medical School were effected, other faculties, especially that of Arts, would gain in room. The transferrence of medical chemistry from the Professor of Inorganic Chemistry to a new branch of the Medical School would relieve much of the congestion of which the Professor of In-

organic Chemistry complains. Similar relief would result from the absorption of the teaching of physics into the Medical School.

The munificent gift to the Sydney University of £465,000 by the late Sir Samuel McCaughey should be used in large part to effect the necessary extension of the buildings of the Medical School. The proportion of this sum, calculated on the basis of the number of students, would be £179,267, but in view of the need for more extensive class-room teaching and laboratory and dissecting-room work within the Medical School as compared with the needs of other faculties, a fair allocation would be £200,000 for the Medical School. It can safely be urged that no better use could be made of the money than to allow it to be the means of enhancing the value of medical education and research in Australia.

The Home Secretary of Queensland announced a few days ago that the *Health Acts Amendment Bill*, which the Government intends to lay before Parliament shortly, will be sufficiently far reaching to "provide a good basis for a medical school." That there is a need for the establishment of a medical school in Queensland none will deny. This school will have to be planned with caution and care, in order that it may take part in the general scheme of reform in medical education and in order that it may admit of expansion in the course of the next few decades. Here again the foresight and generous hand of the late Sir Samuel McCaughey should enable the Government to carry out well the task that might have been attempted on a more economical scale without the bequest. On the other hand, the Government should recognize the advisability of making adequate provision for the several departments of the school and for a sufficient number of chairs to insure efficiency and full utility. In Melbourne and in South Australia lavish expenditure is needed as the first step in the reform. Expansion in new premises has been advocated by Professor Berry for several years. The time has arrived for the change to be effected. The plan may cost a large sum of money, but no better investment could be made, for the interest on the money would be paid year by year in improved health and diminished suffering. It is useless to attempt to provide a medical profession for the whole of the Australian community in premises that have proved cramped during the time when only a fraction of the profession graduated in our own universities. Ample class-rooms and laboratories are needed for the ever-increasing number of students who seek to render themselves proficient in medicine. If the buildings are provided, the second step in the essential reform can be effected with good promise of success.

ŒDEMA OF THE LUNGS.

The onset of œdema of the lungs has long been recognized by physicians as a serious complication in many disorders. Not infrequently it constitutes the fatal terminal event and is considered to be the immediate cause of death. There has been much discussion from time to time on the way in which pulmonary œdema occasions death. It is usually held that the liquid in the pulmonary alveoli prevents mechanically the gaseous exchange in the lungs and that suffocation occurs when the obstruction affects a sufficiently large area of the respiratory surface. Œdema of the lungs has formed a prominent feature in the clinical and pathological reports upon cases of gas poisoning during the war. A special investigation[1] has been carried out by M. C. Winternitz and R. A. Lambert on the question of whether the mere accumulation of fluid in the respiratory passages can lead to death. These observers have had the opportunity of studying the effects of all the gases commonly used in warfare under the exact conditions of the laboratory. They have noted the effects of exposing more than 3,000 dogs and an equal number of other animals to the vapours of different kinds and have studied the results at autopsy. They have been led to the conclusion that œdema of the lungs is merely an indication of some underlying disorder and is rarely, if ever, responsible for the death of an animal or patient. They base their conclusion on three sets of facts. They have noticed that animals killed by exposure to the irritant gases, as chlorine and phosgene, show at autopsy great variations in the degree of pulmonary œdema. While some animals exhibit a large accumulation of fluid, others show little or none. Moreover, animals killed after surviving the critical period of 48 hours exhibit often a higher degree of pulmonary œdema than those which have died earlier. Lastly, the production of artificial pulmonary œdema by irrigation of the lungs demonstrates that the lungs may be freely flooded with saline solution without any evident harmful changes in bodily well-being and without any subsequent lesions in the lung tissues which can be detected with the microscope. As much as six litres of warm physiological salt solution has been passed through the trachea of a dog in two hours without obvious effect. By using coloured fluid it has been ascertained that the liquid has reached the alveoli.

[1] *Journ. Exper. Medicine*, Vol. XXIX., p. 537, June, 1919.

Abstracts from Current Medical Literature.

DERMATOLOGY.

(64) Lichen Planus.

J. H. Macleod has observed that one of the most prominent of the dermatoses of nervous origin, due to the protracted strain of anxiety and overwork during the war has been *lichen planus* (*Practitioner*, May, 1919). He states that the commonest period for its occurrence is between the ages of 40 and 50 years and that females are more prone to this affection than males, in the proportion of three to one. The general consensus of opinion in regard to its ætiology favours a relationship with nervous derangements, for it has been observed to occur in those suffering from neurasthenia, as a result of some debilitating illness with nervous sequelæ, such as influenza, or from physical or mental work, worry or anxiety. It is especially common in women at the time of the menopause. He reports an instance of acute *lichen planus* following a nervous shock in a pilot in the Air Force who witnessed a friend crash to the ground in his machine and killed. In support of the nervous theory, the subjective symptoms may be out of all proportion to the extent of the skin involved. It has been suggested by certain writers that the nervous disturbances are merely predisposing and that the real cause is a toxin circulating in the blood, for in some of the acute cases the onset may be associated with rheumatic pains, sore throat, furred tongue and slight pyrexia, symptoms suggestive of a toxæmia. *Lichen planus* has appeared in the course of some other disease of toxic origin, such as diabetes, and the histology of the lesions somewhat suggests the action of a poison which has reached the skin by the blood stream. In regard to treatment, it must be remembered that in the acute cases arsenic may do more harm than good, but this drug is sometimes found of benefit in the subacute cases. Mercury has given better results than arsenic and in the acute generalized cases antimony is of value in reducing the tension of the skin and in soothing the irritation.

(65) Multiple Pigmented Idiopathic Sarcoma (Kaposi).

A clinical and pathological description of multiple pigmented idiopathic sarcoma is given by E. F. Skinner (*British Journ. Dermat. and Syphilis*, January-March, 1919). The patient was a Jew. The onset of the malady began five years before with a small pin-head-sized, purplish and very itchy nodule on the back of the left hand. This lesion increased in area and later both the left and right feet and legs became affected. At that time he received X-ray treatment, which resulted in a total disappearance of all the lesions. When he was first seen by the author two and a half years later, his clinical condition was as follows: there was an irregularly shaped, dark purplish area on the dorsum of the left hand, as well as invading the tips of the first and second fingers. In appearance they were slightly raised and resembled an extensive plaque of *lichen planus*. On the left leg there were numerous pea-sized nodules, smooth and of a dark purple colour. The nodules tended to become aggregated on the lower part of the leg, fusing into large, irregular, plaque-like areas with serpiginous edges and lichen-like surface. The right leg exhibited only a few nodules. Both feet show lesions very similar to the one on the hand, but the skin was more indurated and darker in colour. The symmetry was the striking feature of the disease on the feet. Where there were no pigmented nodules on the leg a "nodular subcutaneous tissue" could be felt, so that if the hand was passed gently over the leg it received the impression that the skin was stretched over a bag packed tight full of small marbles. Pain interfering with sleep and tenderness on pressure were the symptoms most complained of. Careful examination of the various organs of the body revealed no abnormality. The Wassermann examination of the blood was negative. In spite of lengthy applications of X-rays, of intravenous injections of kharsivan, of treatment with thyroid extract and iodides, as well as massage and radiant heat, the lesions have not only shown no inclination to absorption or improvement, but have rather tended, at least in one instance, to destruction and ulceration. After careful study of sections, the writer is of opinion that the condition is not sarcomatous, a view which has been generally accepted, but rather of a chronic inflammatory nature, as evidenced by proliferation of the connective tissue elements, with vascular dilatation and œdema. This inflammatory view of the disease is also suggested by the striking symmetry of the lesions, produced by some circulating toxin. From a consideration of the foregoing it will be seen that the prognosis is not necessarily as grave as used to be thought, since the disease is not malignant.

(66) The Radiographic Diagnosis of Acute Infections of the Thorax.

Lawrence Litchfield (*Medical Clinics of America*, September, 1918) has investigated in conjunction with a skilled Röntgenologist the question of the diagnosis of acute infections of the thorax. They came to look on fluoroscopic methods as all important in the examination of the chest and plate examinations were only made for the purpose of records or teaching. They found it very convenient to adopt the liver dulness as a unit and described all shadows as fractions of this unit. Lobar pneumonia is first seen as a localized cloudiness with restriction of the diaphragm on the affected side; this may proceed to complete hepatization with shadow density equal to the liver dulness and confined sharply to the affected lobe. A smoky appearance is seen over the rest of the lung and probably on the opposite side. Resolution may be rapid or slow and is characterized by a gradual clearing of the dense shadow. If a lung shadow does not move with respiration, it is due either to fluid or to a solid area fixed by adhesions. If the shadow is movable and is fairly localized, it may be due to hepatization or abscess. If very sharply defined, the latter is the more likely. Cases of pneumonia, in which a hectic temperature developes and yet no localized shadow is seen, as in abscess and empyema, are probably passing into a stage of multiple small abscesses (Landis). Pleurisy with effusion is easy of diagnosis; the fluid casts a dense shadow at the base; the upper level of the shadow varies with posture. In the recumbent position small effusions are difficult to recognize, as the fluid will spread out over the lung and cast no dense shadow. In advanced effusions, the whole side of the chest may be dull and the mediastinal contents displaced to the opposite side. There is no difference in the shadows cast by serous and purulent effusions. In hydro-pneumothorax, the upper level of the fluid is horizontal and by shaking the patient, splashing may be noted. Frequently the traditional signs of pneumothorax are absent. The author advises post-operative fluoroscopic control of all thoracotomy cases in order to define "pockets."

(67) Localization of Foreign Bodies.

Chas. A. Waters gives a short description of the popular mehod of localization of foreign bodies in use at hospitals of the French army (*Americ. Journ. Röntgenol.*, April, 1919). As one progressed from base to front, the methods of localization became less complicated and yet the surgical results of attempted extraction were better towards the front line hospitals. A palpating stick of wood, about 25 centimetres in length, with a screw in either end, was used for palpating the region of the foreign body under the screen and by this means it was determined whether or not the foreign body could be moved and the extent of the excursions. By exerting light and deep pressure with the stick a relatively accurate estimate of the depth can be made. Great skill is quickly attained and it is found that a foreign body which moves with light pressure is situated 2 or 3 cm. beneath the skin and a body which moves with deep pressure is 4 or 5 cm. deep. The method is of great use in the extremities, axilla, buttocks and neck and is of little use in cases of foreign body in the closed cavities. By employing tube shifts, it can also be used as a parallax method.

BIOLOGICAL CHEMISTRY.

(68) The Formation of Phenol.

M. Tsudji has made some observations on the biological formation of

phenol (*Journ. Biol. Chemistry*, May, 1919). It is a well known fact that carbolic acid is produced within the animal body and that it appears among the products of the putrefaction of pancreas, liver, muscle and fibrin. As a rule, the bromine test has been used to detect the phenol. This test fails to distinguish phenol from other similar bodies, especially from paracresol and orthocresol. It is usually held that the phenolic derivatives, isolated under these conditions, are derived from tyrosine. In this connexion Brieger administered tyrosine to a man and found phenol in the urine. The addition of sewer mud to tyrosine leads to the formation of paracresol. Parakresol, however, gives rise to paraoxybenzoic acid after its administration to dogs. Paraoxyphenyl-propionic acid is a well known derivative of tyrosine. It is assumed to be converted to paracresol and thence to phenol. The author points out that other substances, such as paraoxyphenyl-lactic acid and tyramine, are derived from tyrosine and may represent stages in the formation of phenol. He has studied the action of various bacteria on tyrosine and on phenylalanine. He finds that phenol is only produced when *Bacillus coli communis* acts upon tyrosine. Under these conditions phenol is formed in considerable quantities, but no paracresol is formed. It is thus evident that phenol can be produced from tyrosine without the intermediate formation of paraoxyphenyl-proprionic acid. The phenol was identified by isolating it in crystalline form, by determining the melting-point of the crystals and by noting the behaviour of the melting point on mixing the crystals with those of pure carbolic acid. The phenol was found under both aerobic and anaerobic decomposition of tyrosine by the colon bacilli, but none was produced with phenylalanine. The other organisms tested were *Bacillus proteus vulgaris, B. typhosus, B. paratyphosus, B. subtilis* and *B. pyocyaneus.*

(69) Endogenous Uric Acid.

H. F. Höst has estimated the quantity of uric acid in the blood and in the urine of seventeen persons. He presents (*Journ. Biol. Chemistry*, May, 1919) a detailed report of his observations on two of these persons and discusses his results in the light of the figures for the whole series. The author arrives at the conclusion that the excretion of endogenous uric acid during each twenty-four hours is not a constant for the individual. With a fixed diet and under similar conditions it may remain constant in some individuals, but it usually varies over a range from day to day of 80%. Even in individuals in whom the excretion keeps at an approximately constant level, the quantity of uric acid depends on the caloric value of the food, rising and falling with any increase or diminution in the heat value of the ration. This variation takes place independently of the nature of the foodstuff. The change is, however, greater when the number of calories is varied by adding or removing proteins than by changing the quantity of fats or carbohydrates. Whenever the amount of protein in the ration was increased beyond a certain level the excretion of uric acid rose rapidly with any increase in the quantity of protein in the food. Any alteration in the temperature of the body affected the output of endogenous uric acid. In fever this quantity may be increased several times. The excretion of nitrogen and the acidity of the urine, as measured by hydrogen ion concentration, did not influence the excretion of uric acid. The amount of endogenous uric acid varied in the twenty-four hours from 0.27 to 0.99 gm. during a period of 18 days. The high figure was observed when much bread was present in the ration. The uric acid in the blood remains very constant in each individual, though the range in different subjects varied from 0.5 mg. to 2.7 mg. per 100 c.cm. blood. Since the concentration of endogenous uric acid in the blood remains constant in the blood, while it varies with different circumstances in the urine, it follows that a study of the amounts found in the urine will supply information about the rate of formation of uric acid under different conditions. The author has measured the excretion of uric acid during intervals of two hours and has noted that the amount is greatly increased when the activity of the digestive glands is high. He thus thinks it probable that the variations in the quantity of uric acid excreted are dependent on changes in the metabolism of the digestive organs. In his conclusion the author draws attention to the constancy of the concentration of the uric acid in the blood of persons taking a purin-free diet. In different persons the figure varies in wide limits, but he has never noted a variation of 10% in any individual, even in a long period of observation. In contrast with this uniformity there is the variation in the excretion in the urine. The range of this variation varies in different persons; in some it is small, while in others it may range to 80% on either side of the mean figure.

(70) Propagation of Bacillus Coli.

F. J. S. Wyeth has studied the effects of acids upon the growth of *Bacillus coli communis* (*Biochemical Journal*, December, 1918). It was suggested some years ago that the final acidity of a culture of *B. coli* was a physiological constant of the micro-organism, since cultures in lactose bouillon progressed to a constant concentration of hydrogen ion. This suggestion has been challenged from time to time, though a number of investigators have noted a tendency for change to cease at an approximately constant level with different types of colon bacilli. The author has conducted an extensive investigation into this question. He concludes that all strains of *Bacillus coli*, whether of human or bovine origin, behave similarly under similar conditions, and that the degree of acidity of the final reaction is not a physiological constant and cannot be used for diagnostic purposes. The degree of acidity depends on the initial acidity of the medium in which fermentation occurs, on the composition of the medium, especially in respect to the amount of "buffer" salts and on the nature of the acid employed to produce the initial reaction of the medium. Every acid appears to have a specific effect in inhibiting the growth of *Bacillus coli.* The more highly dissociated acids are more strongly inhibitory than those undergoing a less degree of dissociation. The higher the initial acidity the less growth of the bacilli. The mass of acid in the medium is less constantly related to the final acidity than the hydrogen ion concentration.

(71) Lime in Corpuscles.

D. M. Cowie and H. A. Calhoun have measured the quantity of calcium present in the red blood corpuscles of the ox and of man by a modification of the method of Lyman (*Journ. Biol. Chemistry*, April, 1919). Some recent investigators have come to the conclusion that corpuscles contain no calcium and that fibrin clot contains only a small amount of calcium. The authors challenge this statement. By using a recent nephelometric method they show that red corpuscles contain calcium, but in somewhat less concentration than the serum. Their observations have included estimations of the amount of calcium in whole blood, in the serum separated from the clot, in washed corpuscles and in unwashed corpuscles. The authors observed that the amount of calcium in the corpuscles diminished as the corpuscles were washed with salt solution. Human blood contains from 6.6 mg. to 9.08 mg. calcium in each 100 c.cm. blood. The averaged figure from nine persons was 8.45 mg. per 100 c.cm. blood. The unwashed corpuscles contained 4.26 mg. calcium in 100 c.cm. corpuscles.

(72) Nutritive Value of Lactalbumin.

A. D. Emmett and G. O. Suros (*Journ. Biol. Chemistry*, May, 1919) have carried out some feeding experiments upon rats to determine whether lactalbumin acts as a complete protein in promoting growth. There has been a difference of opinion in regard to this question among earlier workers. Osborne and Mendel concluded that lactalbumin was a more satisfactory protein than casein and edestin, while McCollum and his collaborators held that lactalbumin is an incomplete protein and only a poor substitute for casein. The authors have repeated experiments on similar lines to both groups of the earlier investigators and have confirmed the experimental findings. They find that lactalbumin is able to promote rapid growth when it is the sole protein in the ration, provided lactose is present. In the absence of lactose, lactalbumin must be supplemented by some other protein. The authors discuss a number of suggestions in regard to the manner in which lactose may be useful. They conclude that lactalbumin does not lack any of the nitrogenous cleavage products essential for growth.

INFLUENZA AND MARITIME QUARANTINE.

(Continued from page 140.)

Exhaustion of Susceptible Material.

Dr. Cumpston finds, after careful survey of the material at his disposal, that the history of the epidemics on board the *Medic* and the *Boonah* alone of the overseas vessels offers material of a positive description in connexion with the question whether the epidemics terminated as a result of the exhaustion of susceptible material. Both vessels left Australia in October, 1918, with troops on board. They were instructed to return from New Zealand and South Africa after the cessation of hostilities. In regard to the *Boonah*, as has already been mentioned, the distribution of the infection corresponded roughly to the percentage distribution of persons from each State. This fact and the fact that the percentage of cases on board the two vessels was almost identical, precludes, in Dr. Cumpston's opinion, the presence of any artificial immunity produced by a previous epidemic or any natural insusceptibility. Occasional cases occurred among the troops on board for 22 days after the arrival of the *Boonah* at Fremantle and after the epidemic curve had almost reached the zero line. In the case of the *Marathon*, only 89 persons were infected, although effective isolation was impracticable. In the case of the *Sardinia*, 120 persons out of 1,181 became infected. Inoculation, inhalation and early isolation were obviously not factors in limiting the spread. While there remained the possibility that a large percentage of the troops on board were resistant on account of recent attacks of influenza in England, the most probable interpretation of this instance is suggested to be that the epidemic was self-limited and ceased as a result of a decline in infectivity of the infecting agent. The epidemic on board the *Niagara* lasted for 20 days and affected 125 persons. The epidemic apparently began under conditions favourable for rapid spread and the limitation was certainly not due to inhalation, inoculation or early isolation of the affected. In the case of the *Atua*, the epidemic attacked 88 out of a total of 162 persons and killed 16, which represents a mortality rate of 18%. Isolation was carried out efficiently. A comparison is drawn between the conditions obtaining on board the *Niagara*, on which isolation was impracticable, and on board the *Atua*, on which isolation was carried out efficiently. The middle day of the epidemic period was between the eleventh and twelfth in the case of the *Niagara* and between the ninth and tenth in the case of the *Atua*. In the former case, 70% of the cases occurred before the middle day and in the latter 73%. In the case of the *Manuka*, the epidemic was in existence for eight days before the patients were removed to isolation. Twenty-nine of the 39 cases occurred before this event, while 23 cases occurred before and 16 after the middle day of the outbreak.

Greater detail is given in regard to the course of the epidemic on board the *Medic* and the *Boonah*. While it is shown that the great majority of the cases occurred in both epidemics before the patients were removed to isolation, it is noted that the removal of patients began in both cases after the epidemic curve had reached its highest point. In the case of the *Boonah*, the removal was not begun until five days after the highest point had been reached. The daily incidence at that time had diminished very considerably. It is stated that there is no evidence that early removal affected the earlier course of the epidemic in either case and, further, that no important difference is noted in the latter portions of the curve. There would seem to be a survival of infectivity not kept entirely under control by the removal of patients. Reference is made to the fact that the Italians on board the *Medic* took up a passive attitude and refused to report to the doctor when they became ill. The incidence of infection among this group was 62%, which is the highest that has been encountered on any vessel.

In those cases in which isolation on board was impossible and the patients could not be removed from the ship, the frequency of infection was certainly not higher than on the other vessels.

It appears on the evidence available, that the tendency of ship epidemics is to follow a definite and uniform course, independent of any measure of control, although isolation properly carried out may exert a small effect.

Infection on Coastal Vessels.

It is pointed out that the epidemiological significance of inter-State and coastal traffic in connexion with the epidemic is quite different from that of the oversea traffic. The journeys from port to port are short, the passengers constitute a fluctuating population, the introduction of infection at each infected port of call is possible and, on the majority of ships, no surgeon is carried. Dr. Cumpston deals with all the vessels infected between January 1 and April 30, 1919. He shows quite clearly by means of graphs that the maximum percentage incidence occurs when the land epidemic is rising to its maximum. The number of ships infected begins to diminish before the shore epidemic has reached its maximum. He deals with 92 vessels. The disease appeared on board within one day after leaving a port in 64 instances, within two days in 17 instances, within three days in five instances and within four days in two. In no case did the disease appear for the first time on board a vessel later than the fourth day after the last infected port. From February 6, 1919, persons leaving any port for another Australian port were required to make a statutory declaration that they had not been in contact with any person who was suffering from influenza during the preceding seven days. They had to undergo a medical examination, which had to include the taking of temperature and the examination of the pulse and of the throat twice during the 72 hours preceding departure, the second examination being within 24 hours of departure. Before the vessel was allowed to sail, all persons on board were subjected to a further medical examination. It is claimed that under this system many intending travellers in the early stages of an attack have been excluded. It is recognized, however, that there could be no guarantee that persons incubating the disease would be precluded from travelling by sea.

In the case of the *Argyllshire*, there had been some influenza during the voyage between England and Australia. The vessel left Melbourne on February 5 and arrived at Sydney on February 7. A medical inspection was carried out and no illness was detected among the 1,040 soldiers and 149 crew. On February 9 a soldier developed influenza. This man had arrived on the troopship *Mamari*, had stayed on the night of February 4 at an hotel in Melbourne and had embarked on the *Argyllshire* on February 5. The incubation period in this particular case thus appeared to be approximately four and a half days. It is possible, however, that there may have been another person "with a very light attack" when the vessel left Melbourne, as this was before the system of outward medical control of vessels had been initiated. The *Wyandra* left Melbourne on February 1, with 143 passengers and 81 crew. On arrival at Sydney on February 4 no illness was detected. On February 5 the assistant baker was found to be developing a typical attack of influenza. The incubation period is given at between 78 and 88 hours. In all other cases, the first appearance of the disease was noted within three days of departure from an infected port. In the case of 14 vessels, more than 10 persons were affected, while in the remainder less than that number occurred. On some of these vessels no less than 1,200 persons were on board. Details are appended concerning the more extensive outbreaks on these ships. On the *Dimboola* there were six cases on the third day of the epidemic, five occurring among men in the engineer's department. On the following day eleven cases were detected and, after 24 out of the 99 persons had been infected, the epidemic came to an end in eight days. On the *Wyandra*, among 224 persons, 19 infections occurred during the course of nine days. The incidence reached its height on the fifth day. On the *Ooma*, 50 persons out of a total of 56, including 45 Philippinos, became infected. The epidemic reached its height on the sixth day and was complete in eight days, although one man was taken ill four days later. There is reason to believe that this man gained access to the wards and contracted his infection in this way. The *Pacifique* had a crew of 74 persons, including 48 coloured individuals and seven passengers. In the course of eight days, 51 of the 83 persons were affected. The epidemic progressed in stages, affecting first the firemen, then the "boys," then the seamen and lastly the officers and passengers. The greatest

accession of cases was on the third day. The death-rate among the patients from the *Ooma* was 12% and among those from the *Pacifique* was 9%.

In connexion with the coastal steamers, it was pointed out that inhalation, which was carried out with great thoroughness in each case, had no effect in stopping the course of the epidemics. Concerning inoculation, the following facts are related. All persons on board the *Ooma* had been inoculated once on or before December 3, 1918, with Commonwealth coryza vaccine. Those on board the *Pacifique* were inoculated once in February with Commonwealth influenza vaccine, while those on board the *Encounter* were inoculated three times with Commonwealth coryza vaccine between November 26 and December 22, 1918. Dr. Cumpston states that, "as two of these three vessels had more extensive outbreaks than any other vessel trading inter-State, inoculation with vaccine of the composition used had no effect in preventing the spread of the disease." He calls attention to the facts, however, that every member on board the *Encounter* and the *Phantom* had been vaccinated, that 41% of the former and 62% of the latter became infected, but that no deaths occurred among any of the patients. He states that there was no similar record of protection against death in the case of any other widely infected vessel. As a result of the study of the epidemic on board the coastal steamers, Dr. Cumpston arrives at the conclusion that it is very improbable that exhaustion of susceptible material represented a controlling factor in limiting the epidemic.

The history of these epidemics further suggests that a 24-hour inspection, with immediate isolation of persons found to be infected, is insufficient to prevent the spread of the disease. He is inclined to ascribe this to a condition of extreme infectivity at so early a stage that the 24-hour parade is insufficient to secure the removal of all infected persons. There is no evidence of the existence of an infecting or predisposing agent external to the human body. He holds that an epidemic of influenza on board ship will run a definite course, will die out when this course is run and no known administrative procedure will appreciably modify the time-factor. Early detection and isolation of cases appear to be of value in reducing the total number of infections, and much can be done to mitigate the severity of the attack in individual cases.

The Result of Maritime Quarantine.

The application of maritime quarantine in an attempt to exclude a disease like influenza was an experiment. It was freely predicted that the attempt was bound to fail. The operations continued from October until April and during that time 149 uninfected vessels, with 7,075 passengers and 7,941 crew, as well as 79 infected vessels, with 48,072 passengers, 10,454 crew and 2,795 patients, were dealt with. The failure of quarantine defence could be established by a demonstration that there had been a continuity of infection from any one ship to the shore population or that there had been an epidemic on shore during the period of quarantine operations and that the characteristics of the epidemic were identical with those encountered on the quarantined vessels.

It is claimed that no evidence has been produced of an escape of infection by a demonstrable chain from persons or vessels in quarantine to the shore population. Nevertheless, there were, during the middle of January, cases of influenza in Melbourne which were similar symptomatologically to the influenza in quarantine. Immediately following the occurrence of these cases, more or less extensive epidemics occurred in Victoria, in South Australia, in New South Wales, in Queensland and in Western Australia. During the months of October, November and December there was no extensive or virulent epidemic of influenza in any State of Australia. During this period the epidemic in South Africa and that in New Zealand were extremely widespread and fatal. Moreover, serious epidemics were met with in quarantine at the various ports of Australia. According to the report of the Royal Commission in South Africa, 32% of the Europeans in the Union and 46% of the coloured inhabitants were attacked. The total number of deaths was 139,471, including 11,726 Europeans and 127,745 coloured persons. The death-rate among the Europeans was 8.2‰, with a total population of 1,418,060, while the death-rate among the 4,697,152 coloured persons was 27.1‰.

During the same period, *i.e.*, October, November, December, 1918, there were 128 deaths from influenza in Victoria, with a population of 1,411,004, and 207 deaths in New South Wales, with a population of 1,890,654. Had the same death-rate prevailed as in South Africa, the Victorian deaths would have numbered 11,667 and the New South Wales deaths 15,633. In New Zealand, with a population of 1,160,188, 33% of the population was affected and 5,471 individuals died. Had the disease of a similar virulence and prevalence invaded Victoria and New South Wales, the number of deaths would have been 6,652 and 8,915 respectively. It is obvious that, during the period of extreme danger, no infection at all comparable to that existing in South Africa and New Zealand was introduced into Australia. The quarantine period of all vessels with outbreaks of the virulent overseas form of influenza had been completed by the end of the first week in January. On January 9, 1919, the first cases of the local epidemic were recorded in Melbourne. These cases excited no comment and were not known to the State health authorities until some days later. On January 20 it was ascertained that between 50 and 100 cases of a disease resembling the severe form of influenza had occurred in Melbourne. This disease spread steadily, until it had invaded the five mainland States.

Before proceeding to investigate the nature of this disease, Dr. Cumpston seeks information concerning the form of influenza which had previously been prevalent in Australia. He publishes a table, giving the death-rate from influenza and that from broncho-pneumonia and lobar pneumonia in the several States since 1880. As far as influenza is concerned, it appears that, while certain years have been marked by definite epidemics pervading the majority of the States, the period from 1908 to 1917 has been characterized by relatively low death-rates from this disease. In New South Wales the deaths per 100,000 in this period have remained below 10 per 100,000. In Victoria the highest rate was 11.2; in Queensland it reached 16.8 in 1913, in South Australia it was a persistently low rate, in Western Australia the highest rate recorded in the period was 7.8 and in Tasmania it reached 13.1 on one occasion. In 1918 the highest influenza death-rate was 22.8 in Western Australia and the lowest was 10.2 in South Australia. In regard to the pneumonia rates, there has been less fluctuation. In 1918 the rates in New South Wales, Victoria, Queensland and Tasmania varied between 62.9 and 70.7, while in South Australia it was 50.3 and in Western Australia 48.8.

Dr. Cumpston points out that it was well known that an extensive outbreak of influenza occurred in Sydney in September, 1918. According to unofficial estimates, 30% of the population was affected. A very virulent form of influenza was prevalent during the same month at Lithgow. The disease was frequently complicated with pneumonia. There were 18 deaths from this cause in Lithgow during September, four during October and seven in November. A transport, the *Borda*, which left Sydney for Durban on July 18, 1918, sailed from Fremantle on July 29. During the first few days of the voyage several men on board suffered from colds and tonsillitis. On August 6 there was a definite outbreak of influenza. The outbreak abated about August 15.

During the month of October a severe form of influenza, with pneumonia of a fatal type, occurred at Lockhart, in the southern portion of New South Wales. In November about 30 cases of influenza of a type sufficiently severe to excite comment were dealt with in the Melbourne Hospital. From these facts it is concluded that influenza had been unusually prevalent in various parts of Australia during the year 1918, before there was any possible risk of infection from countries having direct communication with Australia.

A table is published, giving the number of deaths from influenza, week by week, in the States of Victoria, New South Wales and South Australia, during the first six months of 1919. A graph is plotted of the death-rate per 100,000 of population in New South Wales. In the same figure are plotted the curves of the Philadelphia and San Francisco epidemics. The highest weekly death-rate in Philadelphia was 250 per 100,000, in San Francisco was 135, in New South Wales was 33.5 and in Victoria was 18.7. It is claimed that the "rigid enforcement of quarantine measures throughout October, November and December of 1918 saved Australia from the disaster suffered by both South Africa and New Zealand and this, in spite of the fact

that all the quarantine stations in Australia were kept extremely active in dealing with arriving vessels infected with a disease showing no less virulity or less extreme fatality than was seen in those other countries."

Dr. Cumpston compares the conditions that have prevailed in Australia with those that obtained in Suva. A small trading vessel, the *Talune*, left New Zealand in the last week of October, 1918, and arrived at Suva on November 4. There were on board some persons suffering from influenza. Some of the passengers landed and three of them developed influenza after they had gone ashore. On November 8, a European living in Suva developed the disease and two days later a second European resident was taken ill. From that time the epidemic spread rapidly through Fiji. The *Talune* proceeded to Tonga and Samoa with a gang of Fijian labourers to work the ship. No restrictions were imposed when the vessel reached these two places and as a result the epidemic gained a foothold in the course of a few days and rapidly affected the whole of the native population. A relief expedition was organized, and, according to the statement of Surgeon-Lieutenant Temple Grey, R.N., who was in charge of the expedition, 20% of the population of Samoa (estimated at 36,405) died of the disease. The death-rate at Tonga was said to have been 7% of the population. The *Talune* left New Zealand about the same time as the *Medic*. Dr. Cumpston states that, but for the rigid quarantine measures that were employed, the fate of Australia would have been worse than that of New Zealand.

In discussing the source of the Australian epidemic, Dr. Cumpston calls attention to the fact that it began in Victoria, where there was the least amount of active infection dealt with in the quarantine station. The administrative details were under a supervision at least as careful as at any other in Australia. A few weeks prior to the outbreak in Victoria, the Quarantine Station in Victoria had been controlled by senior officers who had had large experience in managing quarantine during the arrival of infected vessels at Sydney. It is further noteworthy that, while the epidemic period observed on overseas vessels had a constant minimum period fourteen days, the epidemics seen on board the coastal vessels were complete in eight days. The epidemic spread at a slower rate from State to State and from place to place within Australia than in other countries. The example of New York is quoted. The epidemic was at its height on October 26, 1918, in New York and on November 2, 1918, in San Francisco. The epidemic was well established on January 31, 1919, in Melbourne, but did not become extensive in Sydney until March. It is pointed out that there has been a form of influenza prevalent in Australia since July, 1918, exhibiting characteristics indistinguishable from those of the disease which affected the Commonwealth in 1919. The 1918 disease had a smaller infectivity. "Nothing that is at present known of this disease is in any way inconsistent with the hypothesis of the evolution of an infection already present in Australia to a stage manifesting greater virulence and infectivity, but not attaining that intense degree of virulence and infectivity seen in the closing quarter of 1918 in every country in the world except Australia." It is claimed that the escape from the devastating form of disease was due to the result of the work of the Commonwealth Quarantine Service and was attained by the holding in quarantine of every infected vessel during the six months of danger.

(To be continued.)

British Medical Association News.

SCIENTIFIC.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on July 25, 1919, Dr. F. P. Sandes, the President, in the chair.

Dr. R. Scot Skirving read a paper on the removal of a foreign body from the pericardium and on the treatment of tunnels in bones (see page 145).

Dr. C. Bickerton Blackburn read a paper on the experiences with dysentery during the Palestine campaign (see page 148).

Dr. A. S. D. Barton read a paper on casualty clearing station work, with special reference to new methods (see page 150).

Dr. F. P. Sandes, the President, extended a welcome to the three readers of papers, who had recently returned from active service. He made suitable reference to the excellent work that Dr. Scot Skirving had carried out at Millbank. Dr. Blackburn's war service was a brilliant one, and, in addition, his colleagues wished to express their pleasure on the return of their Vice-President. Dr. Barton's record was a very distinguished one. It might well be said that he could speak as an authority on casualty clearing station work.

Dr. J. Flynn, in referring to Dr. Scot Skirving's heart case, said that he dissented from Dr. Skirving's contention that collapse of the lung was not as serious a matter as was formerly believed. There were effective ways of guarding against the dangers of traumatic pneumothorax. A large opening in a non-adherent pleura, if no precautions were taken by way of pressure anæsthesia, courted disaster. A small opening less than the calibre of the trachea in a non-adherent pleura or a large opening in an adherent pleura, could be made without risk of untoward result, under ordinary anæsthesia. Neither collapse of the lung nor displacement of the heart, was the cause of disaster. The real cause was the displacement of the mediastinum interfering with the action of the sound lung. This fluttering of the mediastinum could be prevented by pressure anæsthesia or by fixing the lung with an instrument like an ovum forcep.

In regard to the difficulty of treating septic cavities in bone, Dr. Flynn pointed out that the subject had been thrashed out very thoroughly. Over a dozen methods had been introduced, having for their object the obliteration of the cavities. He congratulated Dr. Scot Skirving on the success in his cases.

Dr. R. Gordon Craig considered that Dr. Scot Skirving had given them a most excellent and vivid word-picture on the problem of removing a foreign body from the pericardium. Few men had had such an opportunity. He referred to another method of approach, which had been demonstrated to him by Professor Watson, of Adelaide, a few years previously. This was by means of a horse-shoe-shaped incision just below the costal arch, the pericardium being opened through the diaphragm. The operation was easier and more rapidly performed. He had employed it for the purpose of massaging the heart in a person suffering from exophthalmic goitre.

Dr. F. P. Sandes had had experience of a case of a bullet in the right ventricle. He planned the treatment by operation in two stages and completed the first stage. Intratracheal insufflation was not available and the patient had to be anæsthetized in the ordinary way. In the course of the operation a small spicule of bone was pushed through the pleura. The opening was immediately closed and there was but little embarrassment resulting from the entry of a small quantity of air.

In his reply, Dr. Scot Skirving said that he was quite prepared to admit that Dr. Flynn might be on safe grounds theoretically in regard to the danger of opening the pleura. He had opened a good many chests and nothing had occurred. Professor Starling, who had been present at the operation, had urged him not to bother at the pleura. In answer to Dr. Craig, he pointed out that the trans-diaphragmatic operation was excellent in an emergency necessitating massage of the heart. In the case he had described, it was necessary to get a good view of the heart.

In the discussion on Dr. Blackburn's paper, Dr. R. Gordon Craig dealt with the surgical problem in cases of hæmorrhage in dysentery. In many cases there was no evidence of disease. He referred particularly to one case, in which it was found *post mortem* that the bowel from the sigmoid to the rectum contained a multitude of worm-eaten areas and hæmorrhagic ulcers.

Dr. G. R. Halloran referred to the investigations that had been carried out by Professor Woodcock in Abassieh. Among 22 Turkish prisoners, nine were found to be infected with either amœbæ or bacilli. The prevalence of dysentery among the Turkish constituted a grave difficulty in the work of the Army Medical Corps.

Dr. R. A. Fitzherbert spoke of the association of malaria and dysentery. In New Guinea many cases clinically diagnosed to be dysentery ultimately proved to be malarial in origin.

Dr. H. S. Stacy referred to the experience made at the pensions appeal board. They endeavoured to reconcile the clinical symptoms with the bacteriological report. Dr. Blackburn's account of infections remaining latent for years was extremely instructive.

Dr. T. Fiaschi, after referring to the work of Dr. Charles J. Martin at Lemnos, stated that they had found that in amœbic dysentery the ulcers rarely extended beyond the ileo-caecal valve, while in bacillary dysentery they extended into the small intestine and were at times found as high as the duodenum. The bacillary infections were more serious than the amœbic.

Dr. C. E. Wassall stated that at Anzac they had not had a chance to investigate the nature of the low chronic types of dysentery with insidious onset. Many men suffered from diarrhœa and general illness on the peninsula and were sent back to rest at Lemnos. Later the cases at Lemnos became more acute and more rapid. These cases were found to be bacillary.

Dr. Archie Aspinall said that during August and September, 1916, nearly everyone on the peninsula had dysentery. Dr. Andrew Balfour and his colleagues on the commission were inclined to ascribe the diarrhœa to the diet. The men were getting bully beef, biscuits, jam and sometimes bread and onions. It was very obvious that the dysentery was made worse by the diet. He raised the question whether all the dysentery was either amœbic or bacillary.

Dr. Blackburn, in his reply, stated that they recognized cases of dysenteric symptoms in the course of sub-tertian malarial infection. The majority of the patients, however, in Palestine were suffering from bacillary dysentery, while some had malaria as well. It was not surprising that dysentery was so prevalent among the troops, in view of its frequency among the Turks and Egyptians. The latter harboured all sorts of parasites in their bowels and it might be said that every Turk was a museum in himself.

A short discussion took place on Dr. Burton's paper. Dr. Gordon Craig asked Dr. Burton to tell him what impression Willems had made on him. He thought that the personality of a reformer was often a clue to the soundness or otherwise of the reform suggested.

Dr. R. I. Furber spoke of the miraculous results that had been obtained from blood transfusion. He thought that it should be used in civil practice and especially at hospitals. It was not only of value as a method of combating hæmorrhage, but could be used with success in cases of cachexia from long-standing suppuration. He thought it could be easily organized in well-equipped hospitals. He also pleaded for a more satisfactory gas and oxygen apparatus at hospitals.

Dr. J. C. Storey spoke of the team work which had been carried out in Palestine. It had been necessary to train "boys" to give anæsthetics. The training was done on animals. Dental officers had also proved to be valuable anæsthetists. He agreed with Dr. Barton concerning the importance of the length of time between the wounding and the closure of the wound and also concerning the detrimental effect that a prolonged journey had on these patients.

Dr. Stacy referred to the use of gum solution in the place of blood in the treatment of hæmorrhage and shock. Bayliss had spoken very highly of this method, which had obvious advantages over blood transfusion. He also spoke enthusiastically of the value of gas and oxygen as an anæsthetic.

In his reply, Dr. Barton said that he saw too little of Willems to form an opinion. He was said to be a good man.

ANNUAL DINNER.

The annual dinner of the South Australian Branch was held at the Grand Central Hotel, Adelaide, on August 6, 1919. The function took the form of a complimentary dinner and welcome given by the members of the Branch who had not been abroad to those who had returned. On the menu card was printed a list of 111 hosts and of 94 guests. These two lists combined represent practically the whole membership of the Branch.

Sir Joseph Verco, the President, was in the chair. After a most excellent repast had been enjoyed and the President had given the toast of "the King," Dr. A. Lendon proposed a toast "to the memory of the fallen," which was drunk in silence. The members of the Branch who had given their lives for their country were:—

Clive B. Burden
G. A. Harvey
R. B. Lucas
N. C. Shierlaw
J. F. Souter and
J. C. Wells.

The toast of "the returned men" was proposed by the President. Dr. W. T. Hayward, C.M.G., Dr. H. A. Powell, C.M.G., Dr. H. S. Newland, D.S.O., Dr M. H. Downey, D.S.O., and Dr. C. T. de Crespigny, D.S.O., responded. In the course of their remarks each speaker made graceful reference to the excellent work that had been carried out by the President, Sir Joseph Verco, the Principal Medical Officer of the Fourth Military District, Lieutenant-Colonel H. H. E. Russell, Dr. B. Poulton, Dr. W. A. Giles and others who had not been able to go on active service. These men had performed valuable service in regard to the care of returned soldiers, in regard to the routine medical work at the military hospitals and also in safeguarding the interests of their colleagues absent on military service.

"The veterans of former wars" was proposed by the President, in the absence of Dr. F. S. Hone. Dr. B. H. Norris, Dr. R. S. Rodger, Dr. F. Goldsmith and Dr. F. H. Makin replied.

Dr. B. Smeaton proposed "the health of Sir Joseph Verco" in an appropriate speech and the President replied.

Owing to the lighting restrictions, all the speeches were necessarily very brief. Dr. W. A. Verco acted as Honorary Secretary for the dinner.

The undermentioned have been elected members of the Victorian Branch:—

Eric Fitzgerald Harbison, Esq., M.B., Ch.B. (1918, Univ. Melb.), Natimuk.

George Frederick Cherry, Esq., M.B., Ch.B. (1919, Univ. Melb.), Alfred Hospital, Prahran.

The undermentioned have been nominated for election as members of the New South Wales Branch:—

Eric Hamilton White, Esq., M.B., Ch.M., 1918 (Univ. Sydney), 19 Park Road, Auburn.

Oswald Ellis Joseph Murphy, Esq., M.B., Ch.M., 1918 (Univ. Sydney), "Ellismere," Macgregor Street, Croydon.

Hiliary James Kenny, Esq., M.B., Ch.M., 1918 (Univ. Sydney), "Buxton," Belmore Road, Randwick.

THE SOCIETY OF RETURNED MEDICAL OFFICERS OF NEW SOUTH WALES.

A meeting of medical men who had served abroad as medical officers during the war, was held at the B.M.A. Library, 30-34 Elizabeth Street, Sydney, on August 13, 1919. The room was crowded, between 80 and 100 medical officers being present. Dr. R. Scot Skirving was asked to take the chair.

In opening the meeting, Dr. Scot Skirving said that he presumed that the reasons why he had been asked to preside over the meeting were that he was getting terribly old and, further, that he was in a sort of neutral position in regard to his active service. The proposal which had led to the meeting had come from the Returned Medical Officers' Association of Victoria, an institution which had been founded for very excellent objects, the chief of which was the promotion of social intercourse between the men who had served on the other side. The conveners of the meeting had readily accepted the suggestion that a similar association or society should be formed in New South Wales. He hoped that if this course were taken, not only in the State of New South Wales, but also in other parts of the Commonwealth, these various societies would ultimately federate. With the example of Victoria before them, he thought it would be a perfectly fair, just and useful thing for them to start a similar society in New South Wales. He would ask those present to consider two questions. The first was,

was such an association desirable and likely to be useful; and the second was, what was the plan on which they would wish to formulate the objects of their association. He said that it was not easy to find fault with the objects of the Victorian Association, although it would not be difficult to add further objects of an equally laudable nature. He thought that suggestions might be made that evening or at some future date, to extend the scope of the new society. He therefore commended to the meeting the objects that had been adopted in the sister State.

There was another matter with which he had to deal. He approached it with a certain amount of diffidence and hesitancy. He did not mind confessing that he had sympathy with men who had given much in mind, body or estate in the service of the war. He spoke eloquently on the subject of the sacrifice made by many men who had served. It was not uncommon for men on their return to have found that they had lost relatives, money, practice, appointments. Many of these men, no doubt, had a feeling of rancour directed against those who had taken advantage of their absence. They might feel that there was a need for some form of corporate body to voice the claims of medical officers who had suffered in this manner. It was impossible not to sympathize with this attitude. He felt, however, that they should put such thoughts out of their heads or, at all events, leave them expressed in the most nebulous, indefinite way. He hoped that the association which was about to be formed, would be not for offensive or aggressive purposes. He held that the objects should include a mild form of defence for a body of men who had sacrificed much.

Dr. Scot Skirving assured his hearers that if at any time he should have a voice in the determination of who should fill any public appointment, he would give the preference to the returned man, provided that he was competent to undertake the work, even if there were available a man who was a little better, but who had not gone. He referred to the many who did not go. In some cases they were prevented by age, physical disability, professional unfitness and even the straitness of domestic affairs. These impediments must have been a hard hindrance to the men and he sympathized with them because they had been prevented from taking their proper part as men and citizens. Their virtue, however, was of a passive nature, whereas the virtue of the men who had gone, was active. He referred to the leaven—a small leaven, he hoped—who did not go, notwithstanding the fact that no obvious difficulties stood in the way. He found it extremely difficult to understand why these "home patriots" had failed to take any part in the defence of their country. "If they saved their skin and much fine gold, they lost their souls thereby." He would have thought that the spirit of romance and the liking for adventure would have weighed with them, even if the deeper reason left them cold.

In conclusion, he pointed out that those who had given this matter thought, had come to the conclusion that the society must not in any way endeavour to ride over the British Medical Association or its branches. The British Medical Association existed for scientific and for medico-political purposes, in a wide sense. With these things they had nothing to do.

Dr. H. R. G. Poate, after reading apologies from a number of returned medical officers who had been prevented from attending the meeting, formally moved that an association should be formed. He read the draft proposals for the objects of the association, in order that the members should have a clear idea as to what was proposed.

Dr. C. F. Warren asked that the membership should be distinctly open to naval and military medical officers. It was further suggested by Dr. V. Benjafield that medical students who had interrupted their medical course to go on active service, should be eligible for membership after return to Australia and graduation. A discussion followed, in the course of which the proposal was made to extend the membership in various directions. The majority, however, expressed the view very directly that the society should be strictly for returned medical officers. It was eventually resolved:—

> That an association be formed among medical officers who had returned from service overseas and among medical students who had interrupted their courses and had graduated after return from active service; and that the association be called The Society of Returned Medical Officers of New South Wales.

A full discussion took place in connexion with the objects of the Society. The following objects were approved:—

(1) The promote social intercourse among members and to maintain service traditions and friendships.
(2) To insure assistance, as far as possible, to New South Wales medical officers disabled by their services and to the dependants of those officers who had died on service.
(3) To promote the interests and to forward the welfare of members.

In reply to an enquiry as to how the second object could be carried into effect, Dr. R. Gordon Craig referred to the Medical Officers' Relief Fund, of which he was a trustee. He thought that it would be difficult to obtain information concerning the disabilities of returned men and he recognized that many men would hesitate to apply to an official committee, when they needed assistance. The members of the Society would be acting in the interests of these men, if they brought their cases to the notice of the local committee. He also suggested that the Society might perform a very useful function, if it took steps to have the case of medical officers put properly before the Pensions Board.

Dr. C. Bickerton Blackburn thought that the assistance extended to returned medical officers and to the dependants of those who had died on active service, should come largely out of the pockets of those who had not gone, but if there was any need, the members of the Society should be prepared to find the necessary means.

The following were elected office-bearers and members of the Committee. A ballot was taken in connexion with the members of the Committee.

President: Major-General Sir Neville Howse, V.C., K.C.B., K.C.M.G..

Vice-Presidents: Colonel Sir Alexander MacCormick, Major R. Scot Skirving, Colonel T. H. Fiaschi, D.S.O., V.D., Colonel R. E. Roth, C.M.G., D.S.O., V.D., Colonel T. Morgan Martin, C.M.G..

Honorary Secretaries: Lieutenant-Colonel H. R. G. Poate and Lieutenant-Colonel C. E. Wassall, D.S.O..

Honorary Treasurer: Major Wilfred Vickers, D.S.O..

Members of the Committee: Surgeon-Commander H. J. D. Brennand, R.A.N., Lieutenant-Colonel C. B. Blackburn, O.B.E., Lieutenant-Colonel A. H. Tebbutt, D.S.O., Lieutenant-Colonel C. W. Thompson, M.C., D.S.O., Major A. J. Aspinall, Major R. I. Furber, D S.O.. Country members: Colonel J. L. Beeston, C.M.G., V.D., Major E. H. Burkitt.

It was resolved that the first general meeting and annual dinner of the Society should be held in the first week of October. It was further determined that the medical officers present constitute the members of the Society, that an entrance fee of 5s. be charged and that the annual subscription be 5s.

PNEUMONIC INFLUENZA.

In the *Commonwealth of Australia Gazette* the Minister for Trade and Customs publishes a proclamation repealing a proclamation issued on October 17, 1918, to the effect that Fremantle, Adelaide, Melbourne, Sydney and Brisbane were declared to be first ports of entry for vessels arriving in Australia from the Union of South Africa, under the provisions of the *Quarantine Act, 1908-1915*.

Notwithstanding the publication on August 8, 1919, revoking the proclamation that pneumonic influenza was an infectious disease within the meaning and for the purposes of the *Public Health Act, 1902*, as far as the State of New South Wales was concerned, the Minister of Public Health of that State continues to publish proclamations cancelling the proclamations imposing restrictions on persons in various areas. The areas affected in the proclamations published in the *New South Wales Government Gazette* of August 8, 1919, are the municipal areas of Mullumbimby and Bingara and the Gwydir Shire. The proclamations published on August 11 deal with the municipal area of Temora, the Narraburra Shire and the Shires of Coolah

and Kyogle. The proclamations published on August 13 have reference to the Shire of Dalgety and the town of Greta.

In the *Queensland Government Gazette* of August 11 and 12, 1919, the Commissioner of Public Health publishes orders imposing the usual restrictions aiming at the arrest of the spread of influenza on persons within the area of the Shires of Etheridge and Wangaratta.

It appears that a mild form of influenza has been prevalent in Tasmania for some time. No cases of the pandemic type, however, have been noted and this has been attributed to the rigid enforcement of a seven days' quarantine of all persons travelling from the mainland. On August 13 a man applied for admission to the Hobart General Hospital on account of an attack of influenza. The Public Health Department was notified and the man was sent to the isolation hospital at Claremont for observation. Later on the same day three other patients with symptoms similar to those of the pandemic type of influenza were admitted to the Claremont Hospital. The Acting Chief Health Officer, Dr. A. H. Clarke, has consulted the Medical Advisory Board, the members of which are Dr. R. G. Scott, Dr. W. W. Giblin and Dr. R. H. E. Lines. It is not proposed to ask the people of Hobart to submit again to inoculation.

THE SENATE ELECTIONS OF THE UNIVERSITY OF SYDEY.

We have been requested to publish the following letter, which is addressed to the graduates in medicine of the University of Sydney:—

Dear Sir,—Your presence is urgently requested at a meeting to be held at the B.M.A. Building (The Society of Dental Science of New South Wales, Fourth Floor) on the 27th instant at 8 p.m., for the purpose of securing adequate representation of the profession, the Medical School and the hospitals, on the Senate of the University of Sydney.

At present, out of ten elective members, only one is a medical man.

We feel that this marked disproportion should be remedied, more particularly when it is considered that the medical graduates of the University number well nigh a thousand, whilst the number of students in medicine reaches a total of nearly a thousand also.

Yours faithfully,

(Signed) EDWARD J. JENKINS
H. L. MAITLAND
FOURNESS BARRINGTON
C. BICKERTON BLACKBURN
GORDON CRAIG

Sydney, August 19, 1919.

Obituary.

SAMPSON JOHN RODGER GREVILLE.

Sampson John Rodger Greville, son of the well-known actor, J. R. Greville, was born in Geelong, Victoria, in 1862. As a boy he attended Scotch College, Melbourne, and for his later education became a student of Trinity College, Melbourne University. He elected to complete his medical education in Edinburgh, where he attained the diplomas L.R.C.P. and L.R.C.S. in 1886. Post-graduate work attracted him, and in 1888 he became a member of the Royal College of Surgeons, Edinburgh.

Sampson Greville then returned to Australia and accepted an appointment as House Surgeon to the Albury Hospital, New South Wales. After a term at Albury, he discharged the duties of House Surgeon to the Amherst District Hospital for a period of one year and seven months. In the year 1891 he severed his connexion with the last-named institution in order to proceed again to Edinburgh, where his enthusiasm for continued study secured for him the Fellowship of the Royal College of Surgeons and the Diploma of Public Health, Edinburgh.

At the Royal London Ophthalmic Hospital he entered on a special course in relation to diseases of the eye and became thoroughly versed in nose and throat affections at the Hospital for Diseases of the Throat, Golden Square, London. In later years he further cultivated his inclination towards diseases of the eye, ear, nose and throat and made these subjects a specialty in his practice.

Sampson John Rodger Greville eventually established himself in practice at Geraldton, Western Australia, where he remained for six years. His departure from Geraldton elicited a striking testimonial from his fellow-citizens, appreciative of his professional skill, his many kindly actions and consistent, unostentatious charity. After a holiday trip to Europe he commenced practice in South Melbourne, Victoria, and in a seventeen years' association with that suburb developed an extensive connexion.

Sampson Greville married in 1906, and a family of three boys share in their mother's bereavement. His death occurred on July 24, 1919.

For a considerable time before his decease he was obliged to refrain from active practice by reason of ill-health, and spent his later days in retirement at his country home, Ferny Creek, Victoria. Of this retreat he was justly proud, and he entered into the congenial work of developing the picturesque spot with great enthusiasm. The home is unique in position and will be a lasting memorial in landscape gardening.

Sampson Greville was a keen photographer; in photography and gardening he found enjoyable relaxation from the duties of his practice and in his later months much solace. As a young man he was a good oarsman and occupied a seat in the Trinity College boat. His delight in travelling may be judged from the fact that he took four voyages to Europe, on one occasion including America and Japan in a two years' trip. It was while on one of his tours that he was asked to visit the Abrollos Islands to investigate a disease among the natives, which proved to be beri-beri.

Sampson Greville was a man of high principle; to a recognized ability in his work he brought a keen conscientiousness, which made for the faithful discharge of his duties as a practitioner and commanded admiration for him as a man.

Correspondence.

THE AUSTRALASIAN MEDICAL CONGRESS AND THE FEDERAL COMMITTEE.

Sir,—The resolution reported in the *Journal* of August 16 as having been carried leaves this important matter in confusion. This is much to be regretted at the present time, when, as is evident to those watchful of the welfare of the profession, it is of urgent importance that nothing should be left undone to weld together its members in one powerful organization.

At the last meeting of the last session of Congress the resolution was carried that "all future congresses be congresses of the British Medical Association." The intention was to intimate to the B.M.A. that the organization of the Australasian Medical Congress had retired from business and invited the B.M.A. to take its place. The statement that "the resolution purported to bind a body over which the congress had no control and was therefore necessarily invalid" is incorrect and, in fact, pure nonsense. What really is invalid is the resolution of a few gentlemen who own no responsibility to congress, apparently directing that congresses shall be organized and continue as heretofore, in spite of the resolution of congress itself to the contrary. My opinion is, and I may say it is shared by others whom I have spoken to, that if the branches were consulted as to whether members were in favour of the B.M.A. accepting this great opportunity of becoming the one and only organization of the medical profession, there would be an overwhelming vote in the affirmative.

Congresses controlled by the B.M.A. would not differ from the annual meetings of the parent Association in the United Kingdom, except in being triennial. It is indisputable that the B.M.A. meetings invariably lead to a great increase in membership and add to the influence and power for good of the medical profession. There would be even greater certainty of this occurring in Australia, because here public attention is more focussed upon congresses and no man cares to be recognized as so selfish, indifferent and disloyal as to be outside the pale.

The various Governments are increasingly disposed to

consult the B.M.A. in questions affecting the public health. The assistance of our organization has been asked and freely given in the recent great emergencies. Surely it is madness to go out of our way to divert the attention of Governments and public in another direction and re-create (that is what it will amount to) another organization which must inevitably weaken our own.

I maintain that congresses as heretofore organized have been abolished by a formal resolution of the last session and that it is the duty of the B.M.A. to take up the work.

It is earnestly to be hoped that those who value the welfare of the profession, will not attend or lend any aid to a congress which is not controlled and organized by that great organization, so laboriously built up, which has already accomplished so much to promote the knowledge and happiness of medical men.

Yours, etc.,

RALPH WORRALL.

Sydney, August 19, 1919.

Medical Appointments.

Under the provisions of Section 35 of the *Lunacy Act, 1915*, Dr. A. J. W. Philpott (B.M.A.) has been appointed Superintendent of the Receiving House, Ballaarat, Victoria, in place of Dr. W. H. Barker (B.M.A.), who has been superannuated.

Dr. J. J. Luddy (B.M.A.) has been appointed Medical Officer at Mount Morgan, Queensland.

For the purposes of *The Workers' Compensation Act, 1916 to 1918*, Dr. Thomas Warren (B.M.A.) has been appointed Medical Referee for the whole of the State of Queensland.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xix..

University of Adelaide: Professor of Pathology.

Mental Hospital, Parkside, South Australia: Deputy Medical Superintendent.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society..
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Aug. 26.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Aug. 27.—Vic. Branch, B.M.A., Council.
Aug. 28.—S. Aust. Branch, B.M.A..
Aug. 29.—N.S.W. Branch, B.M.A..
Sept. 2.—Tas. Branch, B.M.A., Branch and Council.
Sept. 3.—Vic. Branch, B.M.A..
Sept. 9.—N.S.W. Branch, B.M.A., Ethics Committee.
Sept. 11.—Vic. Branch, B.M.A., Council.
Sept. 11.—Last Day for Nomination of Candidates Representing N.S.W. Branch for Election to the Federal Committee.
Sept. 12.—N.S.W. Branch, B.M.A., Clinical.
Sept. 12.—S. Aust. Branch, B.M.A., Council.
Sept. 12.—Q. Branch, B.M.A., Council.
Sept. 16.—Tas. Branch, B.M.A., Branch and Council.
Sept. 16.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Sept. 17.—W. Aust. Branch, B.M.A., Branch and Council.
Sept. 23.—N.S.W. Branch, Medical Politics Committee; Organization and Science Committee.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney.